

EXHIBIT 6

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

EXHIBIT D-4c

Invalidity of U.S. Patent No. 10,353,811 Based on the Flash MX Professional 2004 System

As described in the following claim chart, claims 1, 2, 4, 5, 8, 9, 22, 24 and 26 of U.S. Patent No. 10,353,811 (the '811 patent) are invalid because they are anticipated under 35 U.S.C. § 102 by the Flash MX Professional 2004 system and/or would have been obvious under 35 U.S.C. § 103 over the Flash MX Professional 2004 system and/or the knowledge of a person of ordinary skill in the art ("POSA").

The Flash MX Professional 2004 software product was publicly released by Macromedia, Inc., no later than September 10, 2003. Manuals and other publications describing Flash MX Professional 2004 were concurrently available. The i-mode HTML Simulator feature was concurrently available, and instructions for downloading and using the feature were concurrently available and provided with Flash MX Professional 2004. A software update for Flash MX Professional 2004, adding Flash Lite 1.1 functionality, was publicly released by Macromedia, Inc., no later than June 26, 2004. Manuals and other publications describing Flash Lite 1.1 were concurrently available. Under the EDTX Model Order Focusing Patent Claims and Prior Art to Reduce Costs, "associated references that describe that instrumentality shall count as one reference, as shall the closely related work of a single prior artist." (EDTX Model Order Focusing Patent Claims and Prior Art to Reduce Costs, at 1 n.1.) The following associated references all describe the Flash MX Professional 2004 instrumentality and, therefore, together with the software product itself collectively count as one reference ("Flash MX Professional 2004 system" or "Flash MX Professional 2004"):

- *Flash MX 2004 Using Flash*, copyright Macromedia, Inc., dated September 2003, provided with the software product and concurrently published at <http://www.macromedia.com/support/documentation/en/flash/> ;
- *Flash MX 2004 Getting Started with Flash*, copyright Macromedia, Inc., dated September 2003, provided with the software product and concurrently published at <http://www.macromedia.com/support/documentation/en/flash/> ;
- *Flash MX Professional 2004 Flash Lite Authoring Guidelines for the i-mode Service by NTT DoCoMo*, copyright Macromedia, Inc., dated March 2003, provided with the software product and concurrently published at <http://www.macromedia.com/support/documentation/en/flash/> ;
- *Flash MX Professional 2004 Flash Lite User Guide*, copyright Macromedia, Inc., dated August 2003, provided with the software product and concurrently published at <http://www.macromedia.com/support/documentation/en/flash/> ;
- Bill Perry, *New Features for Mobile and Devices Developers in Macromedia Flash MX Professional 2004* ("Perry"), published by Macromedia, Inc., no later than September 9, 2003, concurrently with and on the same website as the software product;
- Matthew David, *Building Great Flash MX Games* ("David"), copyright date 2003;
- *Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines*, copyright Macromedia, Inc., dated June 2004 and concurrently published at <http://www.macromedia.com/support/documentation/en/flash/> .

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

Because the Flash MX Professional 2004 software product with its Flash Lite 1.1 update was released no later than June 2004, the Flash MX Professional 2004 system qualifies as prior art at least under pre-AIA 35 U.S.C. §§ 102(a) and (b) based on Wapp's earliest claimed priority date of June 10, 2005 (the date of Provisional Application No. 60/689,101). As set forth in Defendant's ("JPMC's") accompanying invalidity contention cover pleading, the Flash MX Professional 2004 system is prior art under pre-AIA 35 U.S.C. §§ 102(a) and (b) if it is determined that this asserted patent is entitled to a priority date of June 9, 2006 (the filing date of U.S. Patent App. No. 7,813,910). The Flash MX Professional 2004 system additionally qualifies as prior art at least under pre-AIA 35 U.S.C. § 102(f). The named inventor of the asserted patent admitted possessing prior knowledge of Flash and related technologies, including Flash Lite 1.1, Flash MX, Flash MX Professional 2004, and Studio 8, from Macromedia, Inc., as demonstrated in at least the Provisional Application No. 60/689,101 and U.S. Patent App. No. 7,813,910 and associated prior art disclosures, and in prior deposition testimony. Wapp also admits that the named inventor of the asserted patent possessed prior knowledge of Flash technology and in particular that the purported invention was a purported improvement on Macromedia's Flash development environment, as demonstrated at least in Wapp's response on May 8, 2024, to JPMC's interrogatory number 8.

To the extent the Flash MX Professional 2004 system does not expressly or inherently disclose one or more of the limitations of the claims, such limitations would have been obvious in view of the teachings of the Flash MX Professional 2004 system in combination with the knowledge of a POSA and/or one or more of the references identified in JPMC's Invalidity Contentions.

JPMC notes that obviousness analysis involves an expansive and flexible approach that takes into account the background knowledge, creativity, and common sense of a POSA. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 418, 421 (2007). Accordingly, JPMC reserves the right to supplement these statements of obviousness based on further discovery and developments in this case, such as the Court's claim construction.

The chart below provides representative examples of where each element of each claim is found in the referenced prior art. Citations are meant to be exemplary, not exhaustive, and JPMC reserves the right to identify and discuss additional portions of the referenced prior art in support of its contentions and/or to rebut arguments made by Wapp. Citations to figures, drawings, tables, and the like include reference to any accompanying or related text. All internal cross references are meant to incorporate the cross-referenced material as if fully set forth therein.

Wapp's Infringement Contentions have not established that JPMC infringes any valid claim. Thus, JPMC's statements below should not be treated as an admission, implication, or suggestion that JPMC agrees with Wapp regarding either the scope, construction, or interpretation of any of the claims, or the infringement theories advanced by Wapp in its Infringement Contentions, including whether any claim satisfies 35 U.S.C. §§ 101 or 112. In certain cases, JPMC specified non-limiting examples of where its application of the prior art is based on Wapp's apparent application of the claim limitation in the Infringement Contentions. These statements are not

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

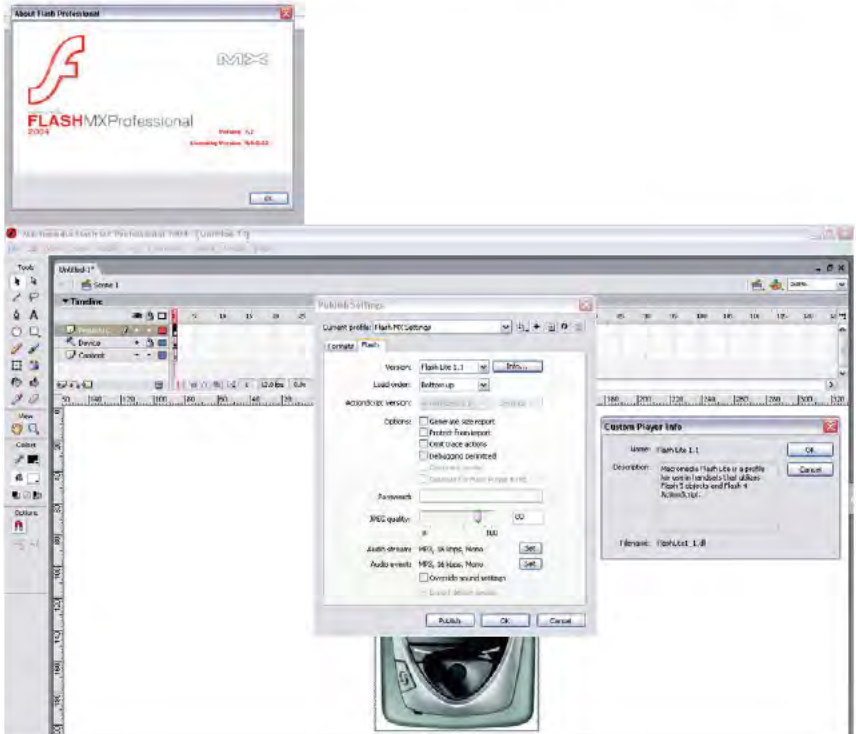
intended to suggest that JPMC agrees with Wapp's application of any claim term. The Court has not yet construed any disputed terms and, therefore, these invalidity contentions take into account all possible constructions. JPMC reserves the right to supplement these contentions after receiving the Court's claim construction or any Court ruling or change of position by Wapp on the priority dates to which Wapp is entitled.

Wapp has yet to identify in this case, any limitation of the claims that it contends is not anticipated and/or rendered obvious by the referenced documents, and/or knowledge of a POSA. JPMC therefore expressly reserves the right to respond to any such contention, including by identifying additional obviousness citations and/or combinations, if Wapp makes any such contentions.

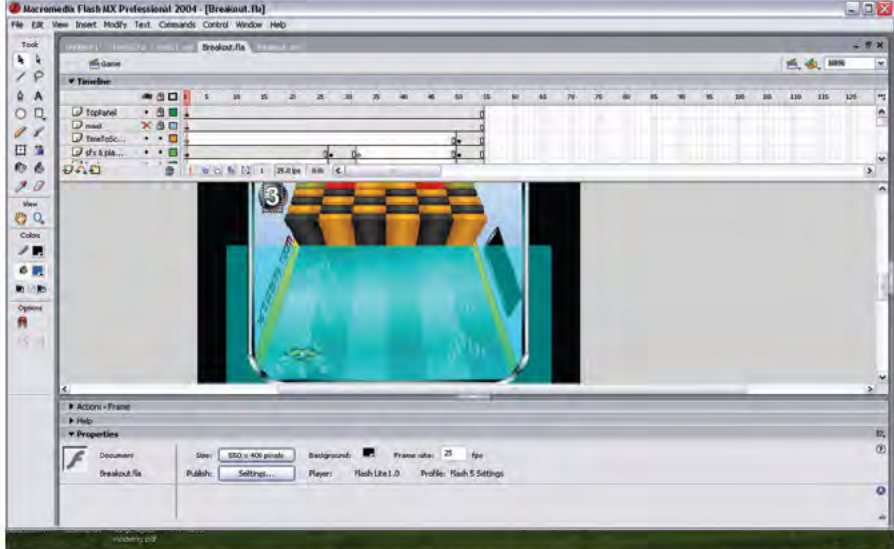
JPMC takes no position in these Invalidity Contentions on whether the preamble of each independent claim is limiting. To the extent each is limiting, the chart below provides examples of where each preamble limitation is found in this prior art.

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

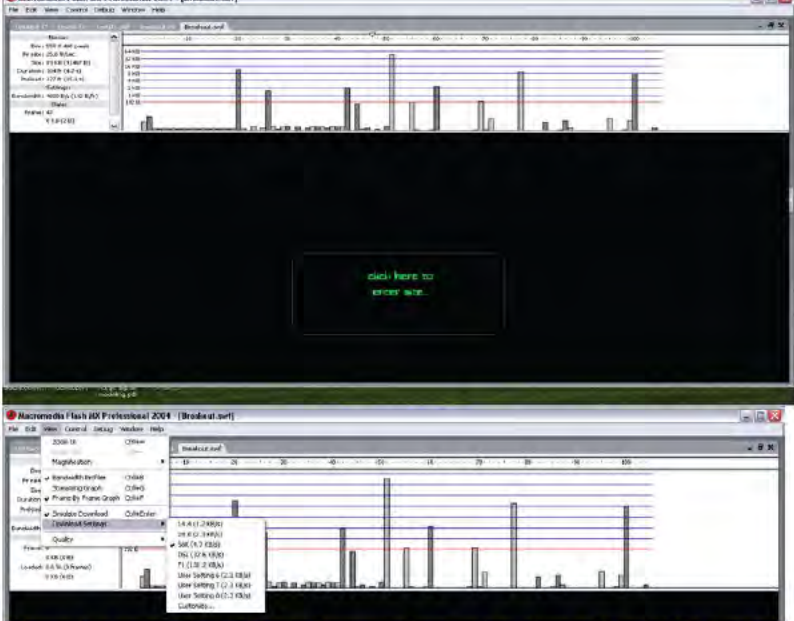
'811 patent

'811 Claim 1	Reference/Combination
<p>1[a] A non-transitory, computer-readable medium comprising software instructions for developing an application to be run on a mobile device, wherein the software instructions, when executed, cause a computer to:</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p> <p>For example, the following are screenshots from Flash MX Professional 2004.</p> 

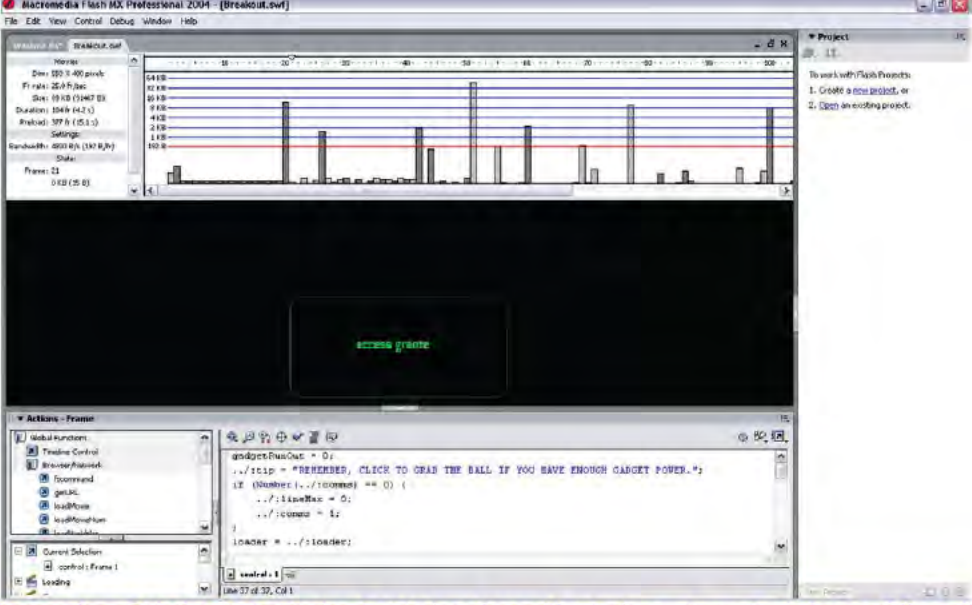
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>Flash MX Professional 2004 with Flash Lite 1.1 update and NTT DoCoMo i-mode simulator 7.2 feature. Flash MX Professional 2004 is a system for developing and testing an application for a mobile device, and it can publish Flash applications to “handsets” (see above window entitled “Custom Player Info”).</p> <p>For example, Flash MX Professional 2004 enables a user to write code to develop visual applications such as animated games using the Flash MX Professional 2004 interface, which consists of at least a stage for imagery and a grid for a timeline. Flash MX Professional 2004 also enables the use of ActionScript, a programming language.</p> 

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p>Above is a screenshot of the software authoring interface of Flash MX Professional 2004 using Breakout.fla and Breakout.swf from Flash MX 2004 Games by Nik Lever.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

811 Claim 1	Reference/Combination
	 <p>The screenshot displays the Macromedia Flash MX Professional 2004 software interface. The main workspace shows a black stage with a green 'action' button. The 'Actions - Frame' window is open, showing the following ActionScript code:</p> <pre> onClipEvent(MouseEvent.CLICK) { gotoAndPlayFromFrame(1); } </pre> <p>The 'Properties' window on the left shows the 'Frame' property set to '1' and 'Frame 1' selected. The 'Timeline' window on the right shows a single frame labeled '1'.</p> <p>Screenshot of Flash MX Professional 2004 interface with "Actions – Frame" window enabling editing ActionScript scripts within the Flash application.</p> <p>For example, Flash MX Professional 2004 was provided on a CD (non-transitory, computer-readable medium comprising software instructions) and alternatively as a downloadable file intended for storage on a hard drive or other storage medium (non-transitory, computer-readable medium comprising software instructions).</p> <p>[Flash MX 2004 Getting Started with Flash, p. 14]</p>

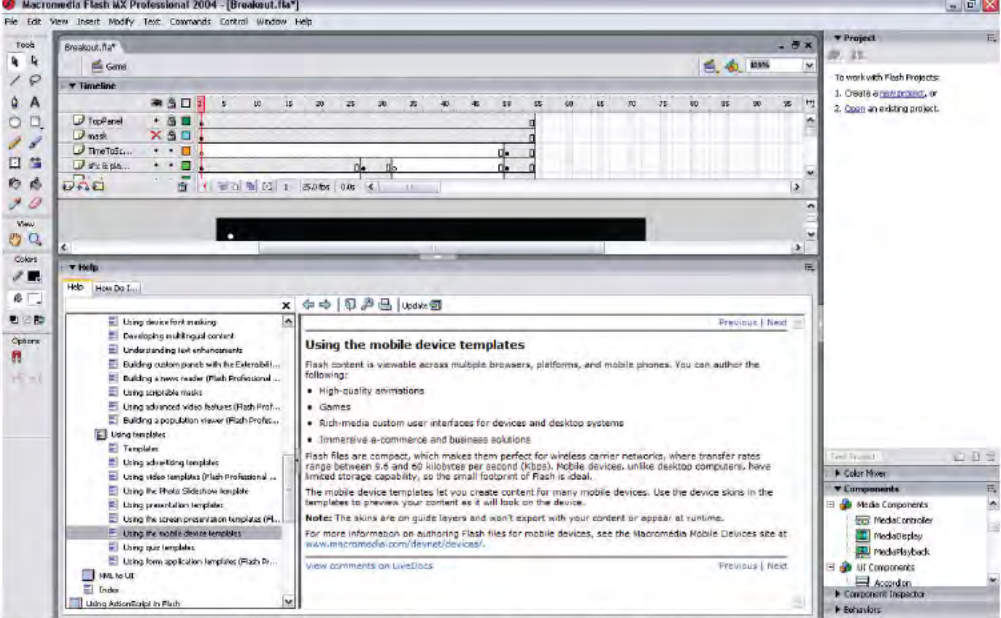
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

811 Claim 1	Reference/Combination
	<p>Do one of the following to start the installation process: [¶] (Windows) If you have a CD, insert it in your CD drive. A Flash movie plays that guides you through installation choices. [...] If you have downloaded Flash from the Internet, double-click FlashMX2004Installer.exe (Windows), or double-click the Installer icon (Macintosh) and follow the onscreen instructions.</p> <p>For example, Flash MX Professional 2004 is software installed on the user's computer. Intrinsic to software installation is a non-transitory, computer-readable medium comprising software instructions.</p> <p>[Flash MX 2004 Using Flash, p. 178] You can install the FLV Export plug-in after installation of Flash MX Professional 2004 is complete.</p> <p>For example, Flash MX Professional 2004 comprises software instructions for developing an application to be run on a mobile device.</p> <p>[Flash MX 2004 Using Flash, p. 390] Flash content is viewable across multiple browsers, platforms, and mobile phones. You can author the following:</p> <ul style="list-style-type: none"> • High-quality animations • Games • Rich-media custom user interfaces for devices and desktop systems • Immersive e-commerce and business solutions [¶] <p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal. [¶]</p> <p>The mobile device templates let you create content for many mobile devices available today. Use the device skins in the templates to preview your content as it will look on the device. [¶] Note: The skins are on guide layers and won't export with your content or appear at runtime. [¶] For more information on authoring Flash</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>files for mobile devices, please visit the Macromedia Mobile Devices site at www.macromedia.com/devnet/devices/.</p> <p>[<i>Flash MX 2004 Using Flash</i>, p. 39] Close the test window to return to the normal authoring environment. [¶] Once you've set up a test environment incorporating the Bandwidth Profiler, you can open any SWF file directly in test mode. The file opens in a Flash Player window, using the Bandwidth Profiler and other selected viewing options.</p> <p>[<i>Flash MX Professional 2004 Flash Lite User Guide</i>, p. 5] Macromedia has created a new Flash Player version, called Macromedia® Flash™ Lite, that runs on a new class of consumer mobile devices. This format is designed to run optimally on devices with limited resources (memory, processor speed, display area). [...] With Macromedia Flash MX Professional 2004, you can author, preview, publish, and validate content for Flash Lite.</p> <p>[<i>Flash MX 2004 Using Flash</i>, p. 18] ActionScript is the Flash scripting language that enables you to add complex interactivity, playback control, and data display to a Flash document. You can add ActionScript within the Flash authoring environment using the Actions panel [...]</p> <p>For example, Flash MX Professional 2004 comprised software instructions that, when executed, cause a computer to carry out the claimed steps, as described below.</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>
1[b] display a list of a plurality of	The Flash MX Professional 2004 system discloses this limitation.

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 1	Reference/Combination
mobile device models from which a user can select,	 <p>Flash MX Professional 2004 showing information about mobile device templates.</p> <p>For example, Flash MX Professional 2004 displays a list of a plurality of mobile device models from which a user can select, including Nokia 3650, Nokia 9200, Sony CLIE UX50, and iPAQ 5440. Each mobile device model includes characteristics indicative of the device such as stage size (screen size), frame rate, a full-size image of the specific device, and the correct Flash publishing settings, including the Flash Player version. These characteristics indicative of the mobile device are simulated when testing the Flash application.</p>

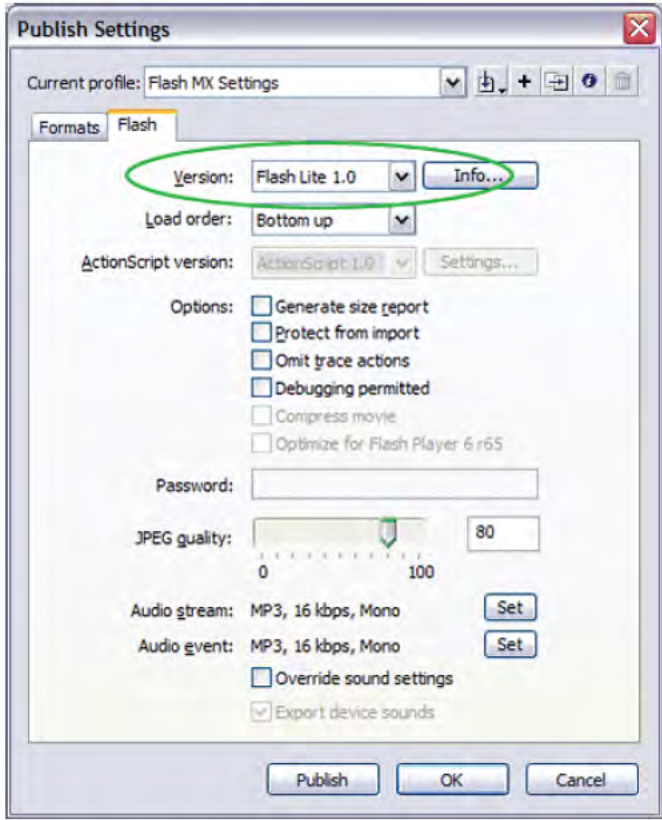
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

’811 Claim 1	Reference/Combination
	<p>[Flash MX 2004 Using Flash, p. 390] Flash content is viewable across multiple browsers, platforms, and mobile phones. You can author the following:</p> <ul style="list-style-type: none"> • High-quality animations • Games • Rich-media custom user interfaces for devices and desktop systems • Immersive e-commerce and business solutions [¶] <p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal. [¶]</p> <p>The mobile device templates let you create content for many mobile devices available today. Use the device skins in the templates to preview your content as it will look on the device. [¶] Note: The skins are on guide layers and won’t export with your content or appear at runtime. [¶] For more information on authoring Flash files for mobile devices, please visit the Macromedia Mobile Devices site at www.macromedia.com/devnet/devices/.</p> <p>[Flash MX 2004 Getting Started with Flash, p. 6] Updated templates[:] Flash includes updated templates for creating presentations, e-learning applications, advertisements, mobile device applications, and other commonly used types of Flash documents. For more information, see “Using templates” in Using Flash Help.</p> <p>[Flash MX 2004 Getting Started with Flash, p. 11] The Start page provides easy access to your most frequently used actions, either at the start of a session or whenever no open documents are in the application window. [¶] The Start page contains the following areas: [¶] Open a Recent Item lets you view your most recent documents. [¶] Open displays the Open File dialog box. [¶] Create New offers a list of file types from which to choose, such as ActionScript or document, for a quick way to open a new file. [¶] Create from Template lists the templates most commonly used to create new documents and allows you to select from the list.</p> <p>[Perry]</p>

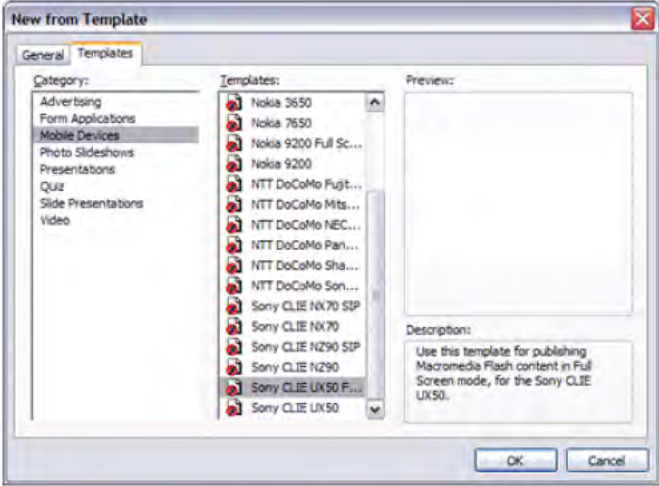
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>New Features for Mobile and Devices Developers [¶] Both products offer the new mobile devices templates, however, only Macromedia Flash MX Professional 2004 provides functionality specific to mobile device development:</p> <ul style="list-style-type: none"> Mobile devices templates MIDI ring tone support Test device emulators Alias text support [¶] <p>In the following section, I'll give you a little more information about these new features and what they mean to you. [¶]</p> <p>Authoring Content for Devices [¶] Exporting Content for Various Versions of Macromedia Flash Player [¶] When authoring for mobile devices, you need to use the correct Macromedia Flash publish settings based on the Macromedia Flash Player requirements of your target device. For more information on some of the devices that play Macromedia Flash content, refer to the Mobile and Devices Developer Center for a list of devices and content development kits for each. [¶]</p> <p>To customize your Macromedia Flash publish settings, you can select an option from the Flash tab of the Publish Settings window. You can access this window in three different ways:</p> <ul style="list-style-type: none"> Select File > Publish Settings. Press the Settings button on the Property inspector with the Stage selected. Use a keyboard shortcut: Control-Shift-F12. [¶]


Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

811 Claim 1	Reference/Combination
	<div data-bbox="375 625 1032 1440"></div> <p data-bbox="375 1472 857 1499">Figure 2. Macromedia Flash publish settings. [¶]</p>

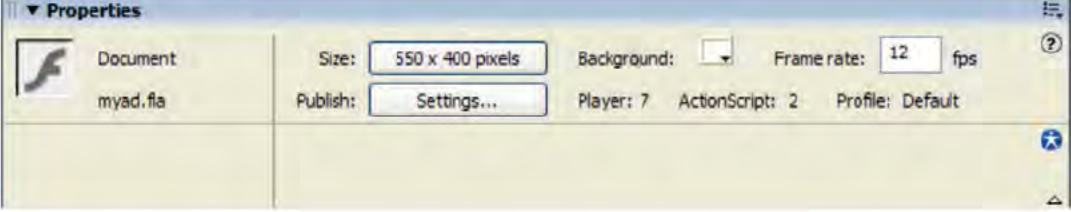
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 1	Reference/Combination
	<p>If you're using the built-in templates for devices, then Flash presets the Flash Player publish settings for each device. However, if you're not using the templates, then you'll need to be ensure that you customize the settings for your device. [¶] The only setting you need to change is the Version setting. Select the proper version of Macromedia Flash Player in the pop-up menu. The rest of the settings are optional and you can refer to the Flash MX Professional 2004 Help panel for additional information on them. [...]</p> <p>Device Templates [¶] New to Macromedia Flash MX Professional 2004 and Macromedia Flash MX 2004 are 22 templates you can use to create content for all of the currently supported mobile devices. You can access them from the Flash start page or by selecting File > New. Click the Template tab in the New from Template dialog box (Figure 6) and select Mobile Devices in the Category pane. [¶]</p>  <p>Figure 6. Mobile Devices templates. [¶]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>These templates take the guess work out of developing Macromedia Flash content for specific platforms. They set the correct stage size, load a full-size image of the specific device in a guide layer, and preset the correct Flash publishing settings. All you need to do is to create the content based on the development kit recommendations for each platform. You can find content development kits for each platform in the Macromedia Mobile and Devices Developer Center. [¶]</p> <p>For example, if you open up the iPAQ 5440 Full Screen template, here's what you will see: [¶]</p>  <p>Figure 7. iPAQ 5440 Full Screen template opened in the authoring environment. [¶]</p> <p>Be sure to use these templates when creating content for mobile devices—they'll definitely save you time.</p> <p>[<i>Flash MX 2004 Getting Started with Flash</i>, p. 49]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p data-bbox="381 905 1446 1020">To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>
1[c] wherein each model includes one or more characteristics indicative of a corresponding mobile device;	The Flash MX Professional 2004 system discloses this limitation.

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

811 Claim 1

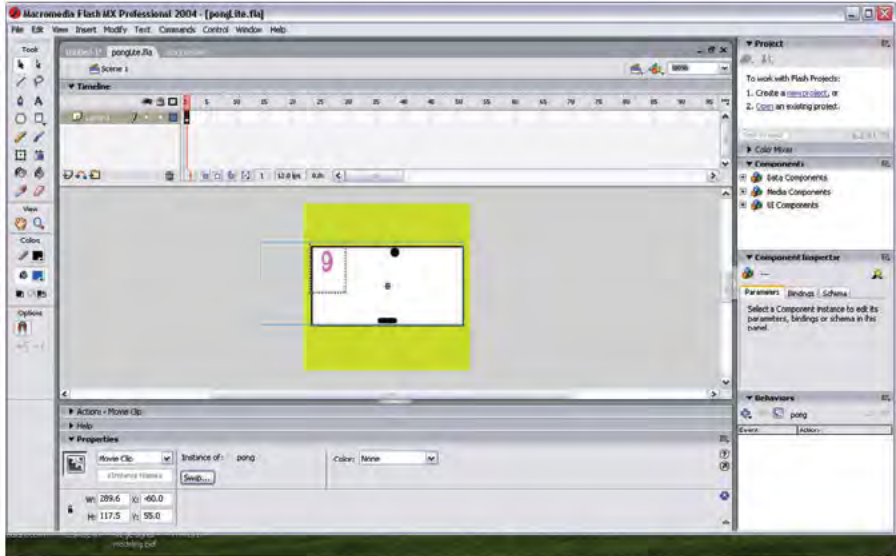
Reference/Combination

Flash MX Professional 2004

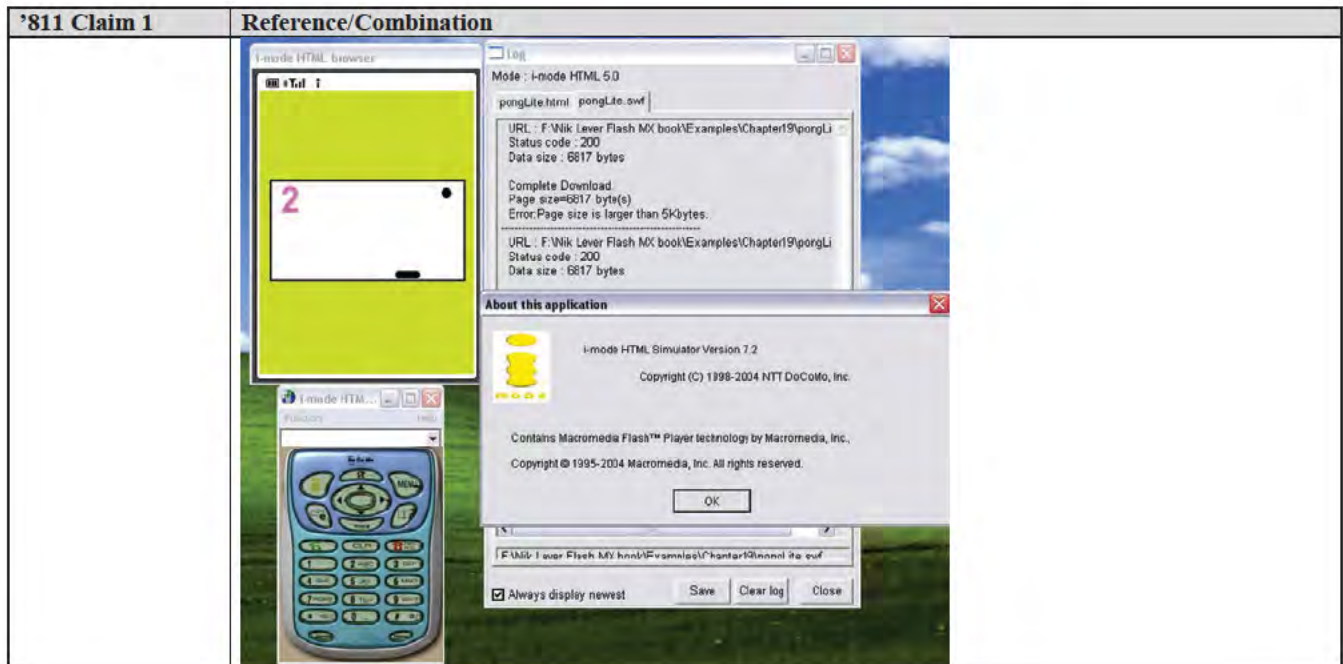
For example, Flash MX Professional 2004 displays a list of a plurality of mobile device models from which a user can select, including Nokia 3650, Nokia 9200, Sony CLIE UX50, and iPAQ 5440. Each mobile device model includes characteristics indicative of the device such as stage size (screen size), frame rate, a full-size image of the specific device, and the correct Flash publishing settings, including the Flash Player version. These characteristics indicative of the mobile device are simulated when testing the Flash application. See disclosures for claim limitation 1[b] (hereby incorporated by reference).

To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004

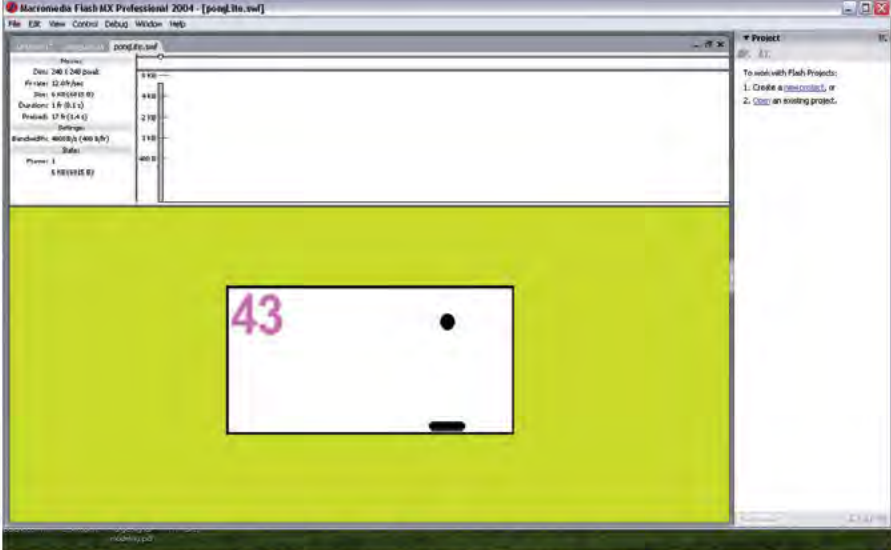
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 1	Reference/Combination
	system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.
1[d] simulate at least one of the one or more characteristics indicative of the mobile device corresponding to the selected mobile device model;	<p>The Flash MX Professional 2004 system discloses this limitation.</p>  <p>The screenshot displays the Macromedia Flash MX Professional 2004 software interface. The main workspace shows a yellow rectangular area representing a mobile device screen, with a small white rectangle inside it. The interface includes a menu bar at the top, a toolbar on the left, a timeline at the top of the workspace, and several panels on the right: 'Project', 'Color Mixer', 'Components', 'Component Inspector', 'Parameters', and 'Behaviors'. The 'Behaviors' panel is currently active, showing a list of actions for a selected instance named 'pong'.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)



Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p data-bbox="378 1157 1451 1182">Flash MX Professional 2004 simulating at least stage size (screen size), frame rate, and Flash Player version.</p> <p data-bbox="378 1268 1451 1436">For example, Flash MX Professional 2004 displays a list of a plurality of mobile device models from which a user can select, including Nokia 3650, Nokia 9200, Sony CLIE UX50, and iPAQ 5440. Each mobile device model includes characteristics indicative of the device such as stage size (screen size), frame rate, a full-size image of the specific device, and the correct Flash publishing settings, including the Flash Player version. These characteristics indicative of the mobile device are simulated when testing the Flash application. See disclosures for claim limitation 1[b] (hereby incorporated by reference).</p> <p data-bbox="378 1467 1451 1493">For example, these characteristics are simulated when testing the Flash application in the Bandwidth Profiler.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p data-bbox="380 606 786 632"><i>[Flash MX 2004 Using Flash</i>, pp. 38–39]</p> <p data-bbox="380 634 1414 716">The Flash Player attempts to meet the frame rate you set; the actual frame rate during playback can vary on different computers. If a document that is downloading reaches a particular frame before the frame's required data has downloaded, the document pauses until the data arrives. [¶]</p> <p data-bbox="380 745 1463 856">To view downloading performance graphically, you can use the Bandwidth Profiler, which shows how much data is sent for each frame according to the modem speed you specify. The Bandwidth Profiler is divided into two panes. The left pane shows information about the document, the download settings, the state, and streams, if any are included. The right pane shows information about individual frames in the document. [¶]</p> <p data-bbox="380 886 1463 997">In simulating the downloading speed, Flash uses estimates of typical Internet performance, not the exact modem speed. For example, if you choose to simulate a modem speed of 28.8 Kbps, Flash sets the actual rate to 2.3 Kbps to reflect typical Internet performance. The profiler also compensates for the added compression support for SWF files, which reduces the file size and improves streaming performance. [¶]</p> <p data-bbox="380 1026 1463 1194">When external SWF files, GIF and XML files, and variables are streamed into a player by using ActionScript calls such as loadMovie and getUrl, the data flows at the rate set for streaming. The stream rate for the main SWF file is reduced based on the reduction of bandwidth caused by the additional data requests. It's helpful to test your document at each speed you intend to support, and on each computer you intend to support. This helps you ensure that the document doesn't overburden the slowest connection and computer it is designed for. [¶]</p> <p data-bbox="380 1224 1442 1281">You can also generate a report of frames that are slowing playback, and then optimize or eliminate some of the content in those frames. See "Optimizing Flash documents" on page 36. [¶]</p> <p data-bbox="380 1310 1442 1367">To change the settings for the SWF file created using the Test Movie and Test Scene commands, use File > Publish Settings. See "Publishing Flash documents" on page 281. [¶]</p> <p data-bbox="380 1396 1463 1503">To test download performance: [¶] Do one of the following: [¶] Select Control > Test Scene or Control > Test Movie. [¶] If you test a scene or document, Flash publishes the current selection as a SWF file using the settings in the Publish Settings dialog box. (See "Publishing Flash documents" on page 281.) The SWF file opens in a new window and begins playing immediately. [¶] Select File > Open, and select a SWF file. [¶]</p>

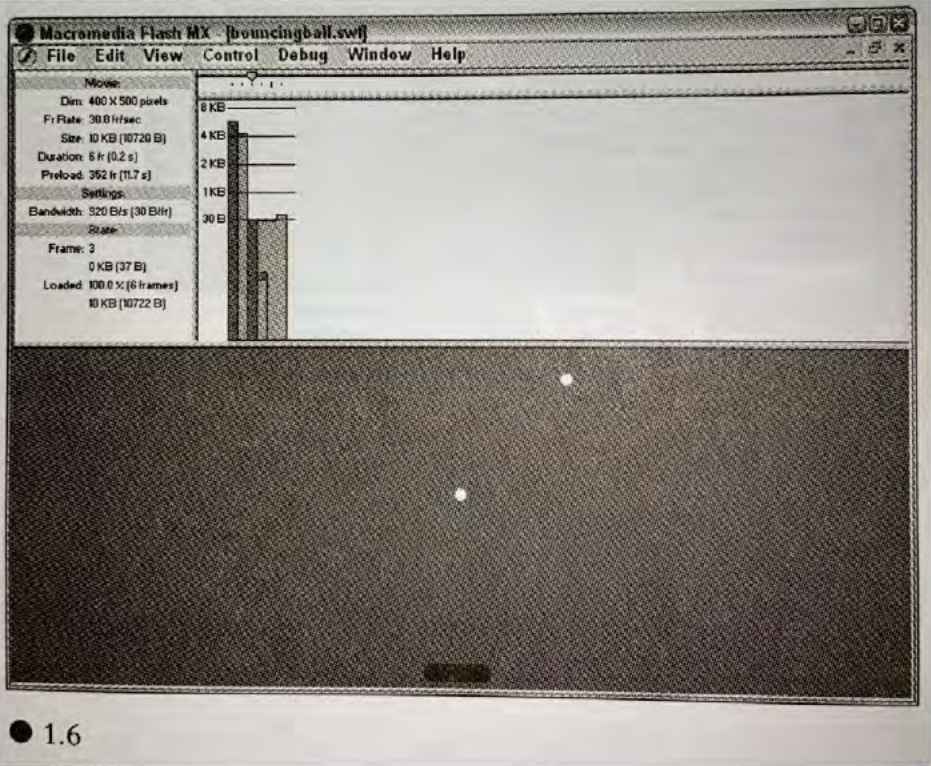
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>Select View > Download Settings, and select a download speed to determine the streaming rate that Flash simulates: 14.4 Kbps, 28.8 Kbps, 56 Kbps, DSL, T1 or a User Setting. To enter your own User Setting, select Customize. [¶]</p> <p>When viewing the SWF file, select View > Bandwidth Profiler to display a graph of the downloading performance. [¶] The left side of the profiler displays information about the document, its settings, its state, and streams, if any are included in the document. [¶] The right section of the profiler shows the Timeline header and graph. In the graph, each bar represents an individual frame of the document. The size of the bar corresponds to that frame's size in bytes. The red line beneath the Timeline header indicates whether a given frame streams in real time with the current modem speed set in the Control menu. If a bar extends above the red line, the document must wait for that frame to load. [¶]</p> <p>Select View > Simulate Download to turn streaming off or on. [¶] If you turn streaming off, the document starts over without simulating a web connection. [¶]</p> <p>Click a bar on the graph to display settings for the corresponding frame in the left window and stop the document. [¶]</p> <p>If necessary, adjust the view of the graph: [¶] Select View > Streaming Graph to show which frames cause pauses. This default view displays alternating light and dark gray blocks representing each frame. The side of each block indicates its relative byte size. The first frame stores a symbol's contents, so it is often larger than other frames. [¶] Select View > Frame by Frame Graph to display the size of each frame. This view helps you see which frames contribute to streaming delays. If any frame block extends above the red line in the graph, the Flash Player halts playback until the entire frame downloads. [¶]</p> <p>Close the test window to return to the normal authoring environment. [¶] Once you've set up a test environment incorporating the Bandwidth Profiler, you can open any SWF file directly in test mode. The file opens in a Flash Player window, using the Bandwidth Profiler and other selected viewing options. [¶] For more information on debugging your documents, see "Writing and Debugging Scripts" in ActionScript Reference Guide Help. [¶]</p>

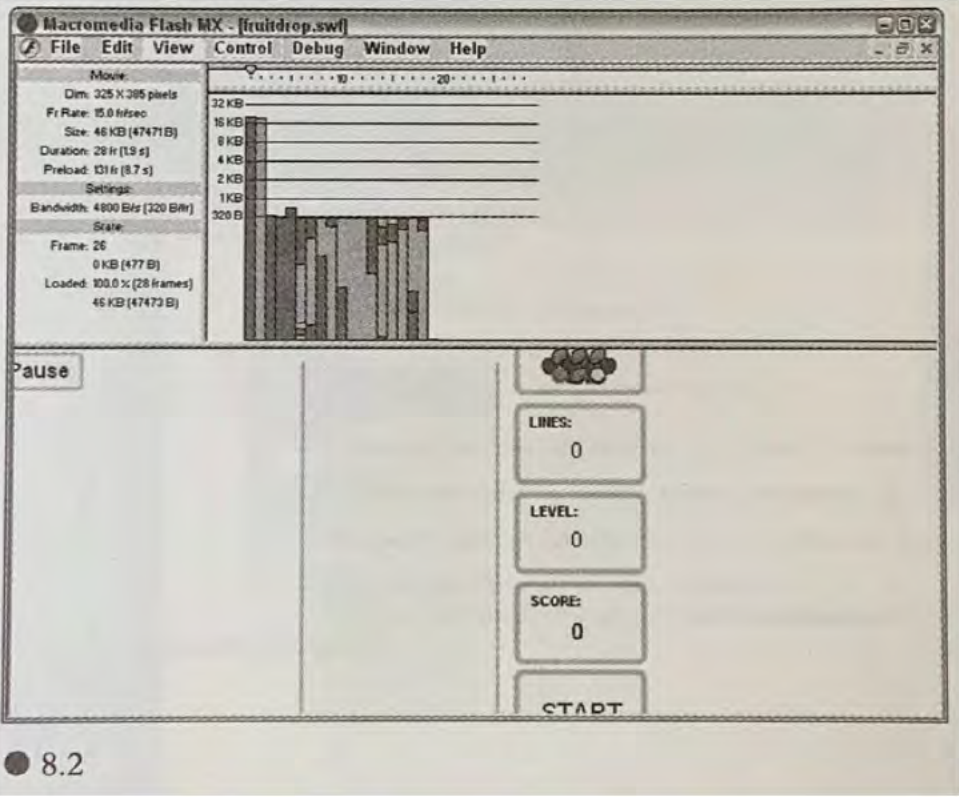
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>To generate a report listing the amount of data in the final Flash Player file: [¶] Select File > Publish Settings and click the Flash tab. [¶] Select Generate Size Report. [¶] Click Publish. [¶]</p> <p>Flash generates a text file with the extension .txt. (If the document file is myMovie.fla, the text file is myMovie Report.txt.) The report lists the size of each frame, shape, text, sound, video and ActionScript script by frame.</p> <p>[Flash MX 2004 Using Flash, p. 390]</p> <p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal.</p> <p>David discloses, via screenshots, the appearance of the Bandwidth Profiler.</p> <p>[David, p. 7]</p>

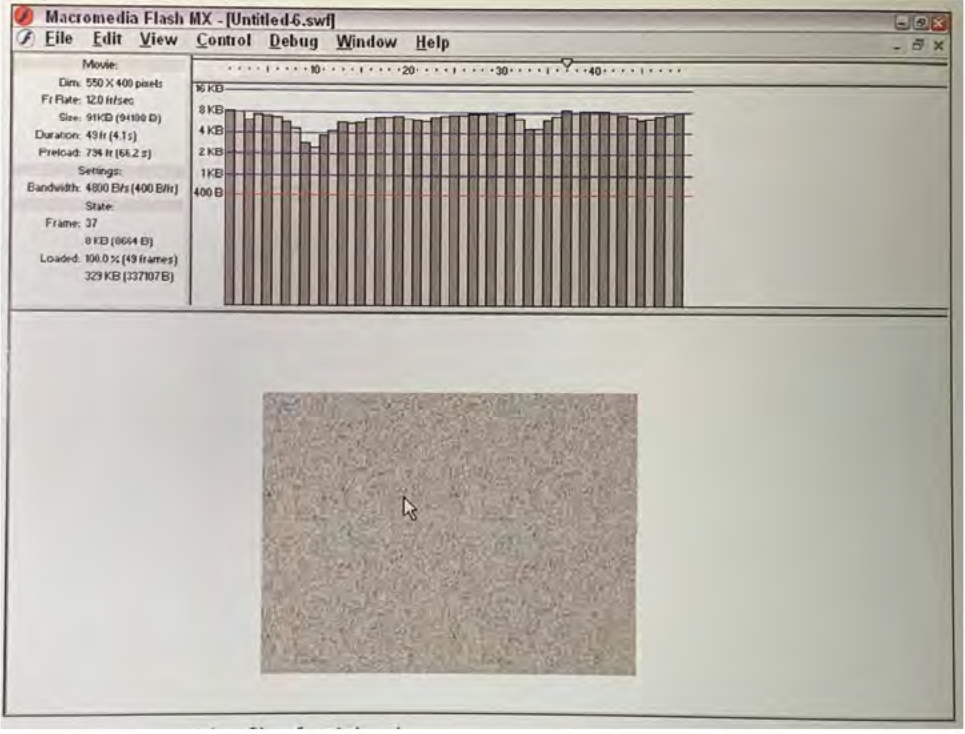
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<div><p>● 1.6</p><p>[David, p. 98]</p></div>

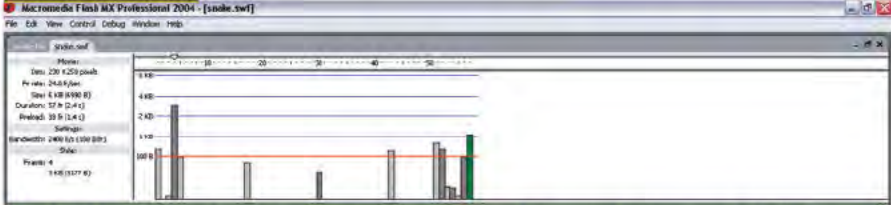
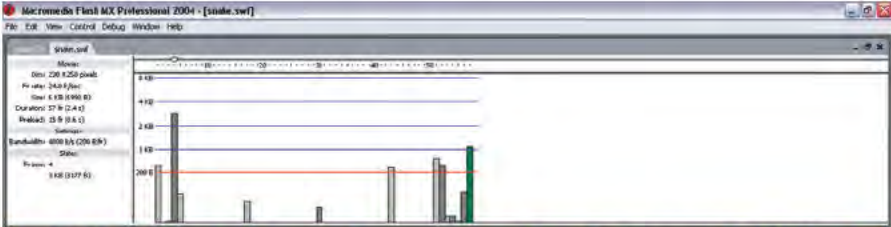
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p>● 8.2</p> <p>[David, #18 of 32 unnumbered pages between pages numbered 192 and 193]</p>

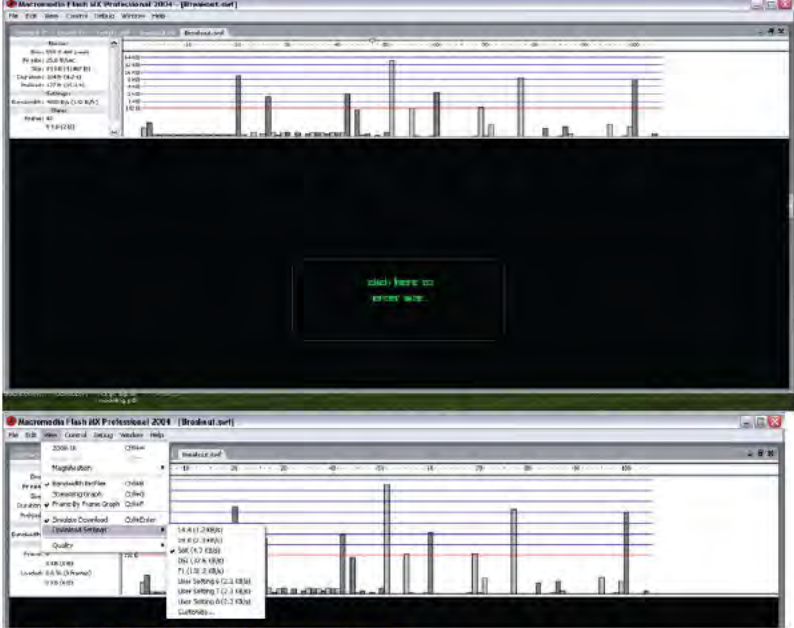
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p>The screenshot shows the Macromedia Flash MX Professional 2004 interface. The top menu bar includes File, Edit, View, Control, Debug, Window, and Help. Below the menu is a timeline with a playhead at 40 seconds. The left panel displays movie properties: Dimensions: 550 X 400 pixels, Frame Rate: 12.0 fps, Size: 911KB (94100 B), Duration: 49 fr (4.1 s), Preload: 734 fr (68.2 s), Settings: Bandwidth: 4800 B/s (400 B/fr), State: Frame: 37, 0 KB (0664 B), Loaded: 100.0 % (49 frames), 329 KB (33780 B). The main canvas shows a video player with a textured background and a mouse cursor.</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 1	Reference/Combination
	system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.
1[e] simulate one or more characteristics indicative of a network on which the mobile device corresponding to the selected mobile device model can operate;	<p>The Flash MX Professional 2004 system discloses this limitation.</p> <p>For example, the Bandwidth Profiler simulates network characteristics while the Flash application runs in the emulator/simulator.</p>  <p>Bandwidth Profiler simulating a web connection and download at a speed of 28.8 kbps.</p>  <p>Bandwidth Profiler simulating a web connection and download at a speed of 56 kbps.</p> <p>Screenshots above from the Flash MX Professional 2004 emulator show a plurality of network characteristics, including "Bandwidth" and the amount of time needed for "Preload" for snake.swf.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

811 Claim 1	Reference/Combination
	 <p>Bandwidth Profiler simulation options.</p> <p>For example, the Bandwidth Profiler in Flash MX Professional 2004 simulates a download, modem speed, a web connection (a network connection state), compression, streams, typical Internet performance (bandwidth), and additional data requests, indicative of a network on which the mobile device corresponding to the selected mobile device model can operate.</p> <p>[Flash MX 2004 Using Flash, pp. 38–39]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>The Flash Player attempts to meet the frame rate you set; the actual frame rate during playback can vary on different computers. If a document that is downloading reaches a particular frame before the frame's required data has downloaded, the document pauses until the data arrives. [¶]</p> <p>To view downloading performance graphically, you can use the Bandwidth Profiler, which shows how much data is sent for each frame according to the modem speed you specify. The Bandwidth Profiler is divided into two panes. The left pane shows information about the document, the download settings, the state, and streams, if any are included. The right pane shows information about individual frames in the document. [¶]</p> <p>In simulating the downloading speed, Flash uses estimates of typical Internet performance, not the exact modem speed. For example, if you choose to simulate a modem speed of 28.8 Kbps, Flash sets the actual rate to 2.3 Kbps to reflect typical Internet performance. The profiler also compensates for the added compression support for SWF files, which reduces the file size and improves streaming performance. [¶]</p> <p>When external SWF files, GIF and XML files, and variables are streamed into a player by using ActionScript calls such as loadMovie and getUrl, the data flows at the rate set for streaming. The stream rate for the main SWF file is reduced based on the reduction of bandwidth caused by the additional data requests. It's helpful to test your document at each speed you intend to support, and on each computer you intend to support. This helps you ensure that the document doesn't overburden the slowest connection and computer it is designed for. [¶]</p> <p>You can also generate a report of frames that are slowing playback, and then optimize or eliminate some of the content in those frames. See "Optimizing Flash documents" on page 36. [¶]</p> <p>To change the settings for the SWF file created using the Test Movie and Test Scene commands, use File > Publish Settings. See "Publishing Flash documents" on page 281. [¶]</p> <p>To test download performance: [¶] Do one of the following: [¶] Select Control > Test Scene or Control > Test Movie. [¶] If you test a scene or document, Flash publishes the current selection as a SWF file using the settings in the Publish Settings dialog box. (See "Publishing Flash documents" on page 281.) The SWF file opens in a new window and begins playing immediately. [¶] Select File > Open, and select a SWF file. [¶]</p>

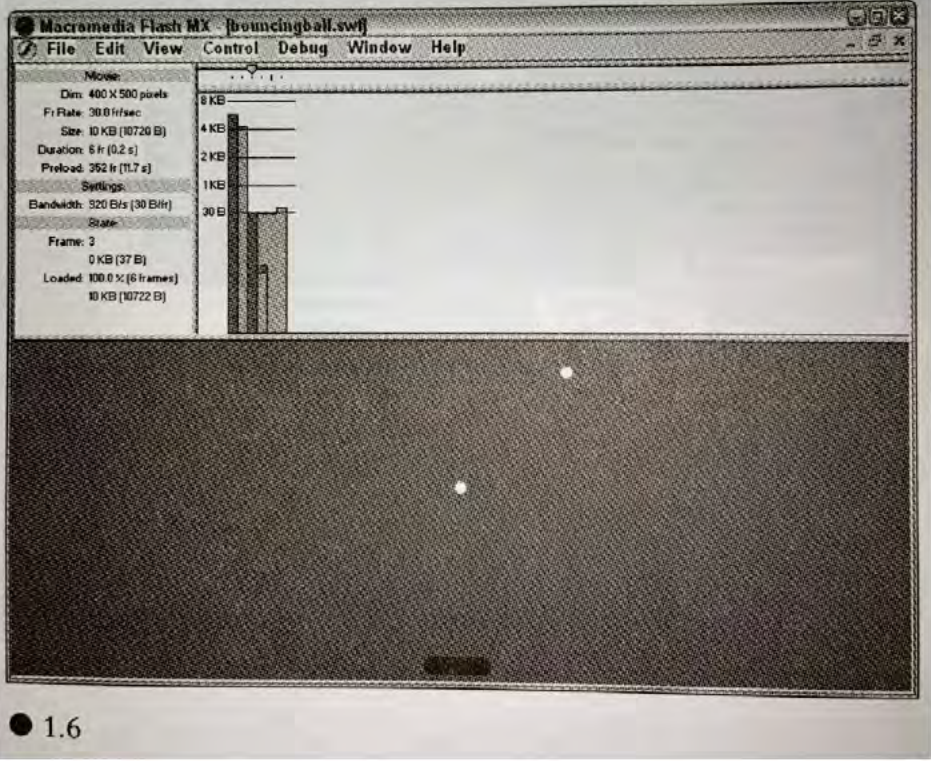
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>Select View > Download Settings, and select a download speed to determine the streaming rate that Flash simulates: 14.4 Kbps, 28.8 Kbps, 56 Kbps, DSL, T1 or a User Setting. To enter your own User Setting, select Customize. [¶]</p> <p>When viewing the SWF file, select View > Bandwidth Profiler to display a graph of the downloading performance. [¶] The left side of the profiler displays information about the document, its settings, its state, and streams, if any are included in the document. [¶] The right section of the profiler shows the Timeline header and graph. In the graph, each bar represents an individual frame of the document. The size of the bar corresponds to that frame's size in bytes. The red line beneath the Timeline header indicates whether a given frame streams in real time with the current modem speed set in the Control menu. If a bar extends above the red line, the document must wait for that frame to load. [¶]</p> <p>Select View > Simulate Download to turn streaming off or on. [¶] If you turn streaming off, the document starts over without simulating a web connection. [¶]</p> <p>Click a bar on the graph to display settings for the corresponding frame in the left window and stop the document. [¶]</p> <p>If necessary, adjust the view of the graph: [¶] Select View > Streaming Graph to show which frames cause pauses. This default view displays alternating light and dark gray blocks representing each frame. The side of each block indicates its relative byte size. The first frame stores a symbol's contents, so it is often larger than other frames. [¶] Select View > Frame by Frame Graph to display the size of each frame. This view helps you see which frames contribute to streaming delays. If any frame block extends above the red line in the graph, the Flash Player halts playback until the entire frame downloads. [¶]</p> <p>Close the test window to return to the normal authoring environment. [¶] Once you've set up a test environment incorporating the Bandwidth Profiler, you can open any SWF file directly in test mode. The file opens in a Flash Player window, using the Bandwidth Profiler and other selected viewing options. [¶] For more information on debugging your documents, see "Writing and Debugging Scripts" in ActionScript Reference Guide Help. [¶]</p>

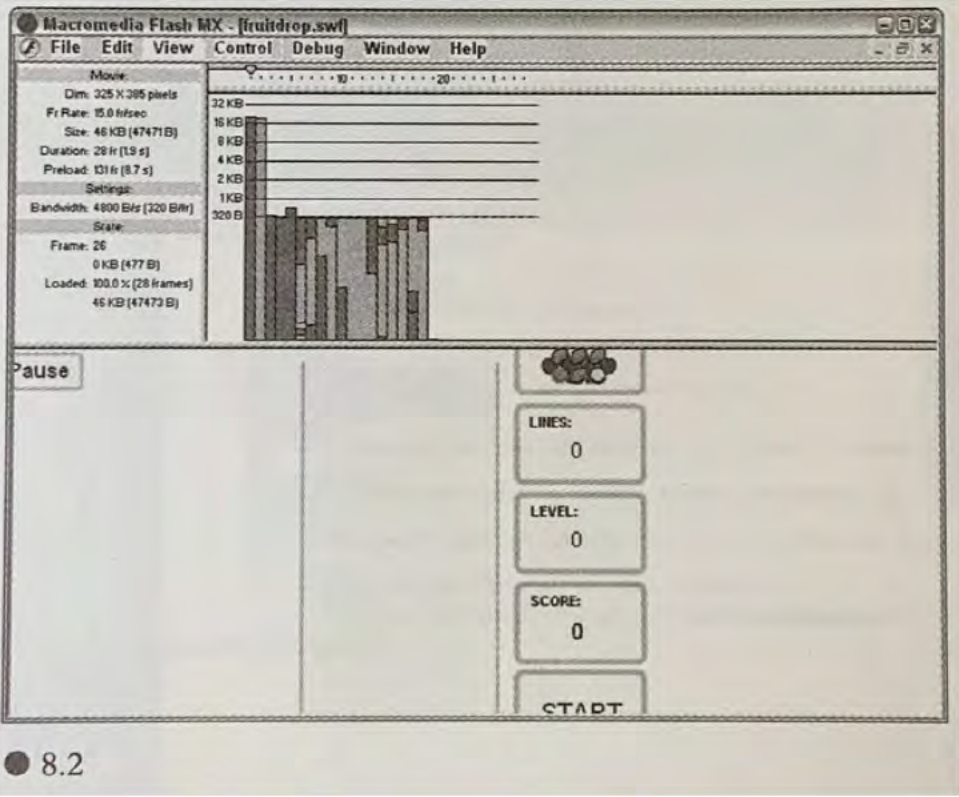
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>To generate a report listing the amount of data in the final Flash Player file: [¶] Select File > Publish Settings and click the Flash tab. [¶] Select Generate Size Report. [¶] Click Publish. [¶]</p> <p>Flash generates a text file with the extension .txt. (If the document file is myMovie.fla, the text file is myMovie Report.txt.) The report lists the size of each frame, shape, text, sound, video and ActionScript script by frame.</p> <p>[Flash MX 2004 Using Flash, p. 390]</p> <p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal.</p> <p>David discloses, via screenshots, the appearance of the Bandwidth Profiler.</p> <p>[David, p. 7]</p>

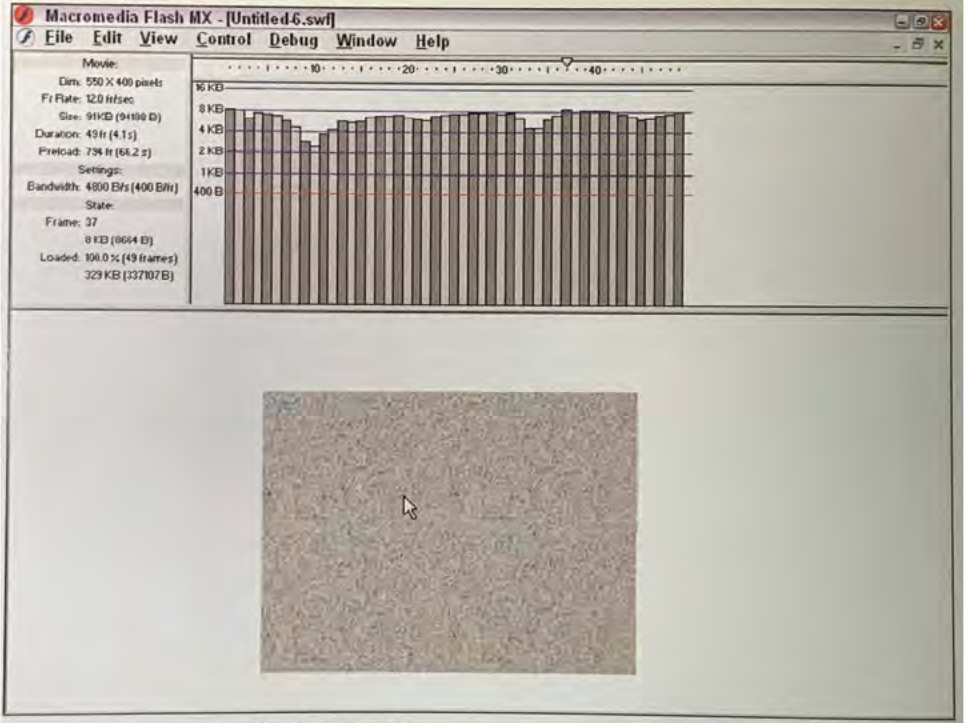
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p data-bbox="391 1318 467 1350">● 1.6</p> <p data-bbox="380 1398 516 1423">[David, p. 98]</p>

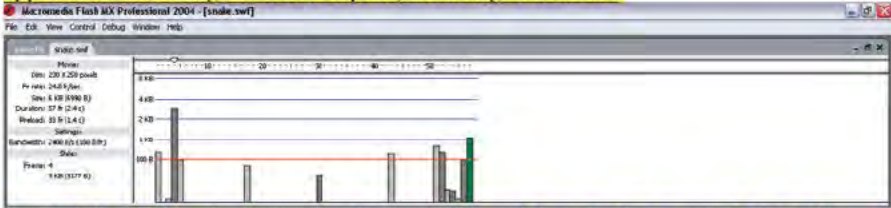
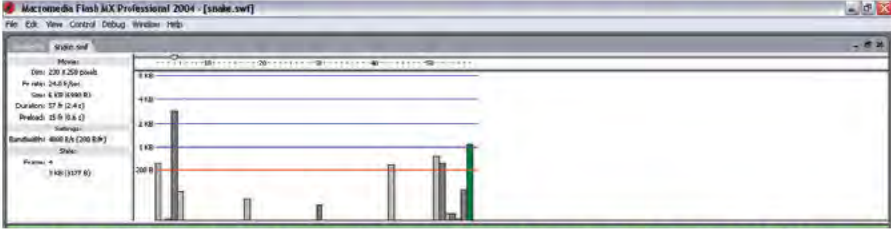
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p>● 8.2</p> <p>[David, #18 of 32 unnumbered pages between pages numbered 192 and 193]</p>

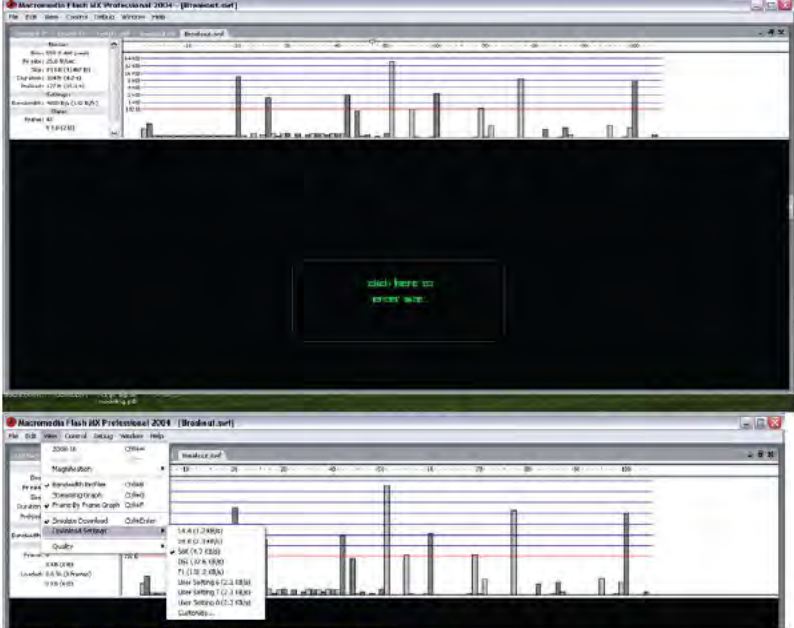
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p>The screenshot shows the Macromedia Flash MX Professional 2004 interface. The top menu bar includes File, Edit, View, Control, Debug, Window, and Help. The main workspace is divided into two sections. The top section displays a timeline with a vertical axis on the left labeled from 400 B to 16 KB. The timeline itself shows a series of vertical bars representing data distribution over time, with a red playhead at the 40-second mark. The bottom section is a video player showing a grainy, textured image. A mouse cursor is visible over the video player.</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

’811 Claim 1	Reference/Combination
<p>1[f] monitor utilization of a plurality of resources over time as the application is running;</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p> <p>For example, the Bandwidth Profiler monitors utilization of a plurality of resources over time as the application is running in the lower pane, including bandwidth.</p>  <p>Bandwidth Profiler simulating a web connection and download at a speed of 28.8 kbps.</p>  <p>Bandwidth Profiler simulating a web connection and download at a speed of 56 kbps.</p> <p>Screenshots above from the Flash MX Professional 2004 emulator show a plurality of network characteristics, including “Bandwidth” and the amount of time needed for “Preload” for snake.swf.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

811 Claim 1	Reference/Combination
	 <p>Bandwidth Profiler simulation options.</p> <p>For example, the Bandwidth Profiler in Flash MX Professional 2004 monitors utilization and/or usage of bandwidth, processor, memory/RAM, and screen, over time as the application is running.</p> <p>[Flash MX 2004 Using Flash, pp. 38–39]</p> <p>The Flash Player attempts to meet the frame rate you set; the actual frame rate during playback</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>can vary on different computers. If a document that is downloading reaches a particular frame before the frame's required data has downloaded, the document pauses until the data arrives. [¶]</p> <p>To view downloading performance graphically, you can use the Bandwidth Profiler, which shows how much data is sent for each frame according to the modem speed you specify. The Bandwidth Profiler is divided into two panes. The left pane shows information about the document, the download settings, the state, and streams, if any are included. The right pane shows information about individual frames in the document. [¶]</p> <p>In simulating the downloading speed, Flash uses estimates of typical Internet performance, not the exact modem speed. For example, if you choose to simulate a modem speed of 28.8 Kbps, Flash sets the actual rate to 2.3 Kbps to reflect typical Internet performance. The profiler also compensates for the added compression support for SWF files, which reduces the file size and improves streaming performance. [¶]</p> <p>When external SWF files, GIF and XML files, and variables are streamed into a player by using ActionScript calls such as loadMovie and getUrl, the data flows at the rate set for streaming. The stream rate for the main SWF file is reduced based on the reduction of bandwidth caused by the additional data requests. It's helpful to test your document at each speed you intend to support, and on each computer you intend to support. This helps you ensure that the document doesn't overburden the slowest connection and computer it is designed for. [¶]</p> <p>You can also generate a report of frames that are slowing playback, and then optimize or eliminate some of the content in those frames. See "Optimizing Flash documents" on page 36. [¶]</p> <p>To change the settings for the SWF file created using the Test Movie and Test Scene commands, use File > Publish Settings. See "Publishing Flash documents" on page 281. [¶]</p> <p>To test download performance: [¶] Do one of the following: [¶] Select Control > Test Scene or Control > Test Movie. [¶] If you test a scene or document, Flash publishes the current selection as a SWF file using the settings in the Publish Settings dialog box. (See "Publishing Flash documents" on page 281.) The SWF file opens in a new window and begins playing immediately. [¶] Select File > Open, and select a SWF file. [¶]</p> <p>Select View > Download Settings, and select a download speed to determine the streaming rate</p>

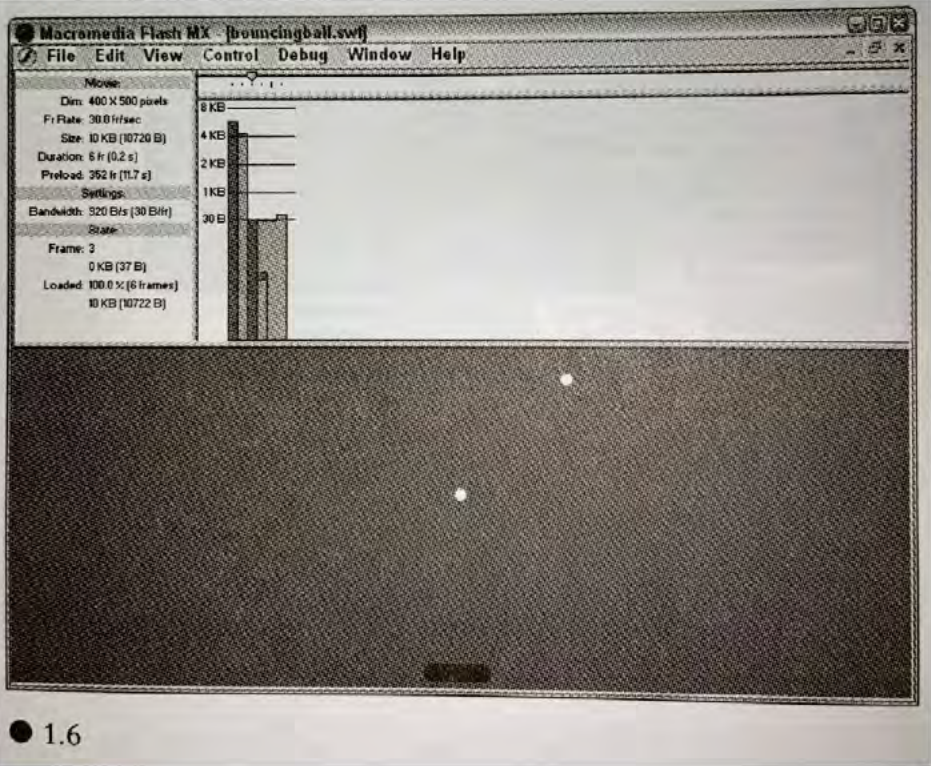
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>that Flash simulates: 14.4 Kbps, 28.8 Kbps, 56 Kbps, DSL, T1 or a User Setting. To enter your own User Setting, select Customize. [¶]</p> <p>When viewing the SWF file, select View > Bandwidth Profiler to display a graph of the downloading performance. [¶] The left side of the profiler displays information about the document, its settings, its state, and streams, if any are included in the document. [¶] The right section of the profiler shows the Timeline header and graph. In the graph, each bar represents an individual frame of the document. The size of the bar corresponds to that frame's size in bytes. The red line beneath the Timeline header indicates whether a given frame streams in real time with the current modem speed set in the Control menu. If a bar extends above the red line, the document must wait for that frame to load. [¶]</p> <p>Select View > Simulate Download to turn streaming off or on. [¶] If you turn streaming off, the document starts over without simulating a web connection. [¶]</p> <p>Click a bar on the graph to display settings for the corresponding frame in the left window and stop the document. [¶]</p> <p>If necessary, adjust the view of the graph: [¶] Select View > Streaming Graph to show which frames cause pauses. This default view displays alternating light and dark gray blocks representing each frame. The side of each block indicates its relative byte size. The first frame stores a symbol's contents, so it is often larger than other frames. [¶] Select View > Frame by Frame Graph to display the size of each frame. This view helps you see which frames contribute to streaming delays. If any frame block extends above the red line in the graph, the Flash Player halts playback until the entire frame downloads. [¶]</p> <p>Close the test window to return to the normal authoring environment. [¶] Once you've set up a test environment incorporating the Bandwidth Profiler, you can open any SWF file directly in test mode. The file opens in a Flash Player window, using the Bandwidth Profiler and other selected viewing options. [¶] For more information on debugging your documents, see "Writing and Debugging Scripts" in ActionScript Reference Guide Help. [¶]</p> <p>To generate a report listing the amount of data in the final Flash Player file: [¶] Select File > Publish Settings and click the Flash tab. [¶] Select Generate Size Report. [¶] Click Publish. [¶]</p>

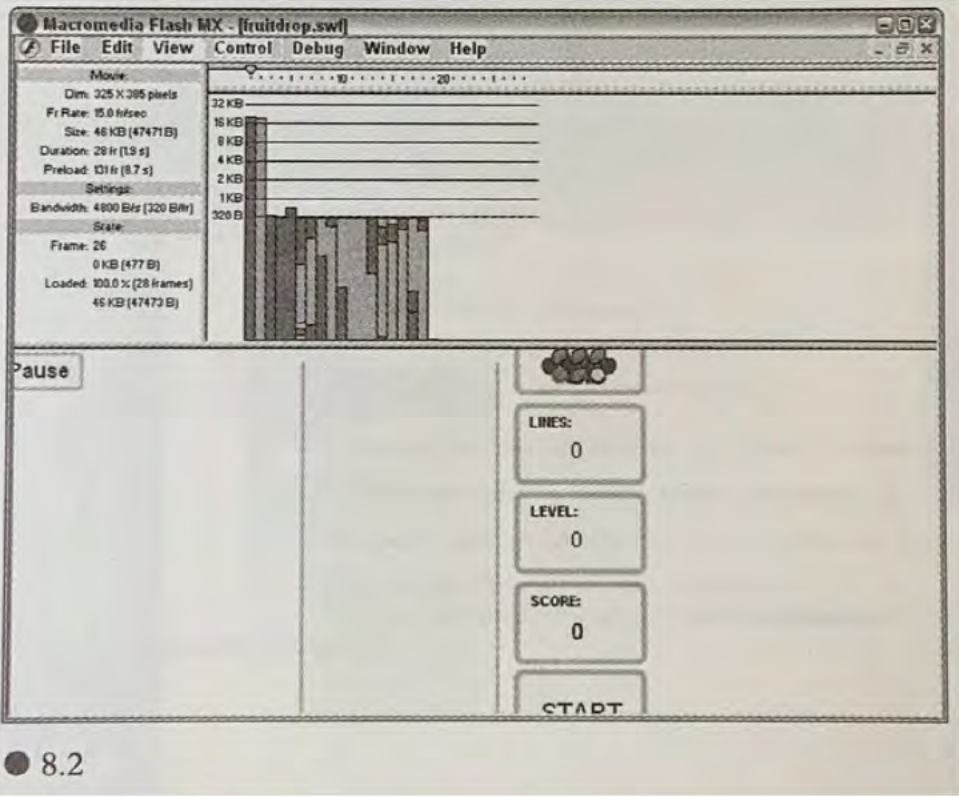
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p data-bbox="378 632 1463 716">Flash generates a text file with the extension .txt. (If the document file is myMovie fla, the text file is myMovie Report.txt.) The report lists the size of each frame, shape, text, sound, video and ActionScript script by frame.</p> <p data-bbox="378 747 753 774">[Flash MX 2004 Using Flash, p. 390]</p> <p data-bbox="378 777 1442 858">In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal.</p> <p data-bbox="378 945 1122 972">David discloses, via screenshots, the appearance of the Bandwidth Profiler.</p> <p data-bbox="378 1003 505 1031">[David, p. 7]</p>

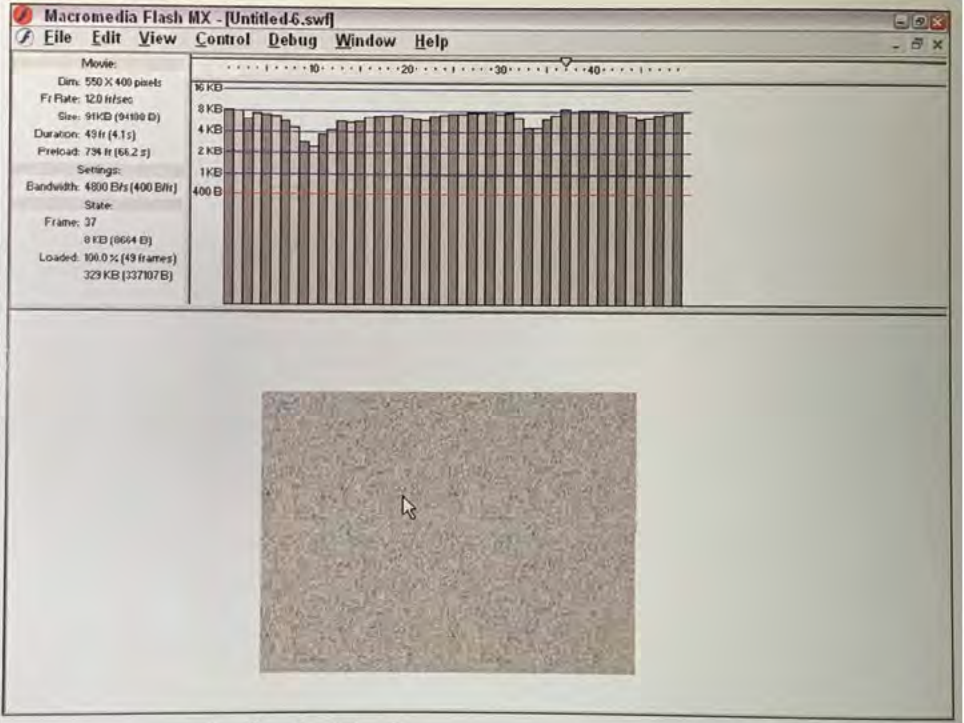
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<div><p>● 1.6</p><p>[David, p. 98]</p></div>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p>● 8.2</p> <p>[David, #18 of 32 unnumbered pages between pages numbered 192 and 193]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p>The screenshot shows the Macromedia Flash MX interface. The top menu bar includes File, Edit, View, Control, Debug, Window, and Help. The left panel displays movie clip properties: Dimensions (550 X 400 pixels), Frame Rate (12.0 fps), Size (91 KB (94100 B)), Duration (4.1 s), Preload (73% (68.2 s)), Settings (Bandwidth: 4800 B/s (400 B/frame)), State (Frame: 37, 0 KB (0 B)), and Loaded (100.0% (49 frames), 329 KB (337107 B)). The top timeline shows a progress bar from 0 to 40 seconds. The main canvas displays a textured, brownish-grey rectangular area with a mouse cursor pointing at it.</p> <p>The Flash Player, used for testing Flash applications and included in the Bandwidth Profiler, monitors processor utilization and frame rate.</p> <p>[<i>Flash MX 2004 Using Flash</i>, p. 286]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>Select Quality options to determine the trade-off between processing time and appearance, as follows. This option sets the QUALITY parameter's value in the object and embed tags. [¶] Low favors playback speed over appearance and does not use anti-aliasing. [¶]</p> <p>Auto Low emphasizes speed at first but improves appearance whenever possible. Playback begins with anti-aliasing turned off. If Flash Player detects that the processor can handle it, anti-aliasing is turned on. [¶] Auto High emphasizes playback speed and appearance equally at first but sacrifices appearance for playback speed if necessary. Playback begins with anti-aliasing turned on. If the actual frame rate drops below the specified frame rate, anti-aliasing is turned off to improve playback speed. Use this setting to emulate the View > Antialias setting in Flash.</p> <p>[Flash MX 2004 Using Flash, p. 151] The frame rate, the speed at which the animation is played, is measured in number of frames per second. A frame rate that's too slow makes the animation appear to stop and start; a frame rate that's too fast blurs the details of the animation. A frame rate of 12 frames per second (fps) usually gives the best results on the web. QuickTime and AVI movies generally have a frame rate of 12 fps, while the standard motion-picture rate is 24 fps. [¶] The complexity of the animation and the speed of the computer on which the animation is being played affect the smoothness of the playback. Test your animations on a variety of machines to determine optimum frame rates. [¶] Because you specify only one frame rate for the entire Flash document, it's a good idea to set this rate before you begin creating animation. See "Creating or opening a document and setting properties" on page 9.</p> <p>[Flash MX 2004 Using Flash, p. 9] Creating or opening a document and setting properties [¶] You can create a new document or open a previously saved document as you work in Flash. In Windows, you can use the New File button to open a document of the same type as the last document created. [¶]</p> <p>To set the size, frame rate, background color, and other properties of a new or existing document, you use the Document Properties dialog box. You can also use the Property inspector to set properties for an existing document. The Property inspector makes it easy to access and change the most commonly used attributes of a document. For more information on the Property inspector, see "Using panels and the Property inspector" in Getting Started Help.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

811 Claim 1	Reference/Combination
	<p>[<i>Flash MX 2004 Using Flash</i>, p. 10] To set properties for a new or existing document in the Document Properties dialog box: [¶] 1 With the document open, select Modify > Document. [¶] The Document Properties dialog box appears. [¶] 2 For Frame Rate, enter the number of animation frames to be displayed every second. For most computer-displayed animations, especially those playing from a website, 8 fps (frames per second) to 12 fps is sufficient (12 fps is the default frame rate).</p> <p>[<i>Flash MX 2004 Using Flash</i>, p. 38] The Flash Player attempts to meet the frame rate you set; the actual frame rate during playback can vary on different computers.</p> <p>[<i>Flash MX 2004 Using Flash</i>, p. 306] (Optional) Specifies the level of anti-aliasing to be used during playback of your application. Because anti-aliasing requires a faster processor to smooth each frame of the SWF file before it is rendered on the viewer's screen, select a value based on whether speed or appearance is your top priority: [¶] Low favors playback speed over appearance and never uses anti-aliasing. [¶]</p> <p>Autolow emphasizes speed at first but improves appearance whenever possible. Playback begins with anti-aliasing turned off. If Flash Player detects that the processor can handle it, anti-aliasing is turned on. [¶]</p> <p>Autohigh emphasizes playback speed and appearance equally at first but sacrifices appearance for playback speed if necessary. Playback begins with anti-aliasing turned on. If the frame rate drops below the specified frame rate, anti-aliasing is turned off to improve playback speed. Use this setting to emulate the Antialias command in Flash (View > Preview Mode > Antialias).</p> <p>[<i>Flash MX 2004 Getting Started with Flash</i>, p. 21] The Timeline status display at the bottom of the Timeline indicates the selected frame number, the current frame rate, and the elapsed time to the current frame. [¶] Note: When an animation is played, the actual frame rate is displayed; this may differ from the document frame rate if the computer can't display the animation quickly enough.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

811 Claim 1	Reference/Combination
	<p>[Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines, pp. 15–16] Performance optimization ¶ CPU speed in mobile phones varies among models and is typically much slower than the CPU speed in current desktop computers. Therefore, it is extremely important to consider application performance and optimization from the beginning of each project for creating Flash Lite content created for mobile phones. ¶ Note: In Flash MX Professional 2004, you can find tips on optimizing Flash applications. (Select Help > Using Flash -> Search and enter optimizing movies in the Keyword Searchtext box.) ¶ If you follow the simple guidelines described in this document to author your Flash Lite content, you can create rich and compelling content despite CPU limitations. ¶</p> <p>Animation ¶ When creating animated content for a mobile phone, it is important to keep in mind the phone's CPU limitations. The following guidelines can help prevent your Flash Lite content from running slowly: ¶ • If you need to provide intense or complex animation, experiment with changing the quality setting of the content. The default quality setting is Medium. ¶ To change the quality setting in Flash MX Professional 2004, select File > Publish Settings, and select the HTML tab. Select a quality setting from the Quality pop-up menu. ¶ Because changing the quality setting might noticeably affect the visual quality of the Flash Lite content, make sure to thoroughly test the SWF file.</p> <p>[Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines, p. 19] Device speed and frames per second ¶ If the project contains static images, it's not likely that the device processor speed will be an issue. The complexity of Flash requires some important trade-offs when developing content for mobile phones. Until mobile phones have faster processors and there are improvements to other internal components, you must make adjustments to provide an experience that does not appear sluggish to users; otherwise, they won't use the application. ¶ Try to avoid full-screen wipes, fades, and animations. Remember that updating many pixels at a time can be slow, depending on the content. The performance of your Flash application depends on the number of open applications, available phone memory, processor speed, and screen resolution.</p> <p>[Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines, p. 48] To create a Flash Lite 1.1 compatible SWF file: ¶ 1. In Flash MX Professional 2004, create a new document and name it FlashLiteTest fla. ¶ 2. Select File > Publish Settings, and then the Flash tab. In the Version pop-up menu, select Flash Lite 1.1. Click OK. ¶ 3. From the Property inspector select the Size button, and</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

’811 Claim 1	Reference/Combination
	<p>change your document properties so that width = 240, height = 266, and Frame Rate = 15. Click OK. Make sure to use the appropriate frame rate on the actual devices.</p> <p><i>[Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines, p. 57]</i> The development kit includes a variety of sample files (FLA and SWF files) that demonstrate many of the concepts and applications that are described in this document. These examples are included to help you create content for mobile phones. The files include capabilities examples, processor detectors, and data-driven examples. Be sure to view the readme.txt file in the folder associated with each sample file.</p> <p>The Flash Player further monitors memory/RAM utilization, evidenced by for example setting maximum memory sizes, detecting out-of-memory errors and buffer overruns, and determining the memory used and remaining.</p> <p><i>[Flash MX 2004 Using Flash, p. 280]</i> Buffer overrun protection prevents the intentional misuse of external files in a Flash document to overwrite a user’s memory or insert destructive code such as a virus. This prevents a Flash document from reading or writing data outside the document’s designated memory space on a user’s system. Buffer overrun protection is enabled automatically.</p> <p><i>[Flash MX Professional 2004 Flash Lite Authoring Guidelines for the i-mode Service by NTT DoCoMo, p. 23]</i> Set the run-time memory available to Flash Lite movies running in the i-mode HTML simulator.</p> <p><i>[Flash MX Professional 2004 Flash Lite Authoring Guidelines for the i-mode Service by NTT DoCoMo, pp. 41 – 42]</i> This appendix lists the possible information, warning, and error messages you might encounter when creating movies for Flash Lite for i-mode. [...] SWFS033 [¶] Not enough memory to perform operation. [¶] The Flash player was unable to get enough memory to finish the operation</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

’811 Claim 1	Reference/Combination
	<p>[<i>Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines</i>, p. 33] The GetFreePlayerMemory() function returns the amount of memory, in kilobytes, currently available to Flash Lite. [...] The GetTotalPlayerMemory() function returns the total amount of memory, in kilobytes, allocated to Flash Lite.</p> <p>Moreover, concerns about mobile devices’ limited CPU, memory, and network speeds pervade the Flash MX Professional 2004 manuals’ discussions of developing Flash content for mobile devices.</p> <p>[<i>Flash MX 2004 Using Flash</i>, p. 390] In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal.</p> <p>[<i>Flash MX Professional 2004 Flash Lite User Guide</i>, p. 5] Macromedia has created a new Flash Player version, called Macromedia® Flash™ Lite, that runs on a new class of consumer mobile devices. This format is designed to run optimally on devices with limited resources (memory, processor speed, display area). [...] With Macromedia Flash MX Professional 2004, you can author, preview, publish, and validate content for Flash Lite.</p> <p>[<i>Flash MX Professional 2004 Flash Lite Authoring Guidelines for the i-mode Service by NTT DoCoMo</i>, p. 10] There are limitations on file size and run-time memory usage for Flash Lite movies running on i-mode phones. There is a prescribed limit on how large a web page can be, whether it includes Flash Lite movies or not. For 505i phones, this limit is 20KB. Full details can be found at the DoCoMo website (see Appendix D, “References,” on page 47). This limit applies to an i-mode page’s HTML, SWF content, and all graphic images combined. Web pages larger than this limit cannot be downloaded to an i-mode phone and no error message appears. This limitation also applies to Flash Lite movies played directly in the browser without being embedded in an i-mode compatible HTML file. [¶]</p>

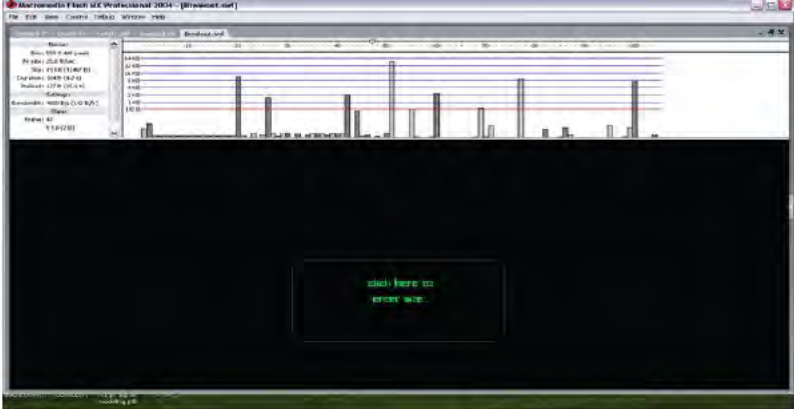
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>The run-time memory available to Flash Lite movies running on i-mode phones is limited and may vary from model to model. Generally, for the 505i phones, this limit is not less than 200KB. Because Flash MX Professional 2004 does not provide a mechanism for checking a phone's run-time memory consumption, Macromedia strongly recommends that you test all content on actual i-mode phones.</p> <p><i>[Flash MX Professional 2004 Flash Lite Authoring Guidelines for the i-mode Service by NTT DoCoMo, p. 11]</i></p> <p>CPU speed in i-mode phones varies from model to model, and is typically much slower than current desktop computers. Therefore, it is extremely important to consider movie performance and optimization from the beginning of each project. The optimization recommendations for creating any Flash movie also apply to Flash Lite movies created for i-mode phones. For the latter, their importance is amplified. [¶] Note: In Flash MX Professional 2004, you can find tips on optimizing Flash movies—select Help > Using Flash -> Search and enter optimizing movies in the keyword search text box. [¶] If you follow some simple guidelines, as described in this document, to author your movies, you can create rich and compelling content despite CPU limitations.</p> <p><i>[Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines, p. 17]</i></p> <p>Flash Lite generally uses vector graphics to define content, which can tax a phone's CPU when rendering complex graphics and animations. In general, the more vectors that are manipulated on the Stage, the more CPU power is required. This is also true for Flash movies delivered on desktop computers. However, a mobile phone is far less powerful than desktop computer, so you should avoid taxing the CPU. [¶]</p> <p>When creating content for mobile phones, it is sometimes better to use bitmaps instead of vectors because they require less CPU power to animate. For example, a road map of a large city would have too many complex shapes to scroll and animate well on a mobile phone if it were created as a vector graphic; a bitmap would work much better. [¶]</p> <p>Using bitmaps produces larger files than using vector images, so take care during development to find the right balance of CPU versus file size and runtime memory requirements. Because of mobile phones' smaller screens, slower data transmission speeds, limited memory, and slower CPU speeds, you should take extra care in planning and testing.</p>

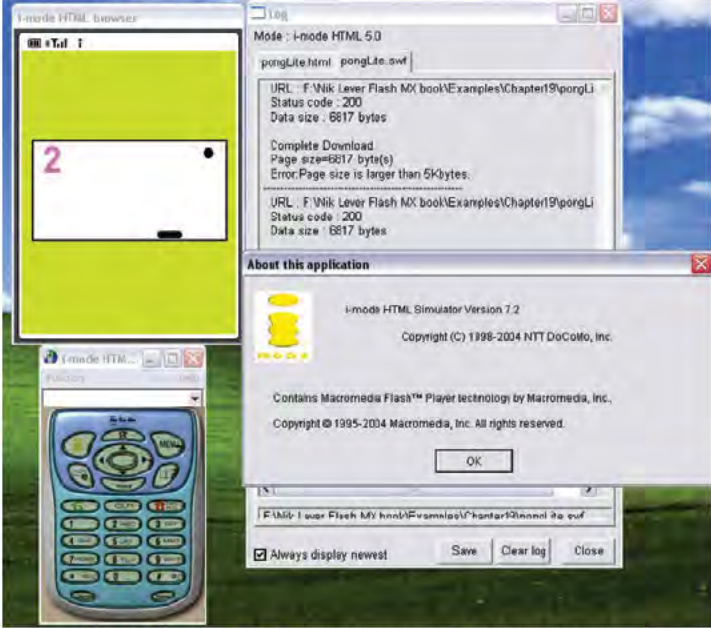
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 1	Reference/Combination
	<p>[Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines, p. 17] Device speed and frames per second [¶] If the project contains static images, it's not likely that the device processor speed will be an issue. The complexity of Flash requires some important trade-offs when developing content for mobile phones. Until mobile phones have faster processors and there are improvements to other internal components, you must make adjustments to provide an experience that does not appear sluggish to users; otherwise, they won't use the application. [¶] Try to avoid full-screen wipes, fades, and animations. Remember that updating many pixels at a time can be slow, depending on the content. The performance of your Flash application depends on the number of open applications, available phone memory, processor speed, and screen resolution.</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>
<p>1[g] display simultaneously two or more graphical images of the application's resource utilization, wherein each graphical image relates to a different resource;</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p> <p>For example, the Bandwidth Profiler displays simultaneously two or more graphical images of the application's resource utilization, wherein each graphical image relates to a different resource.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p>The screenshot displays the Bandwidth Profiler interface. The top section features a bar chart representing network usage over time, with a red horizontal line indicating a threshold. Below the chart, a large black rectangular area represents screen usage, with a small green box in the center containing the text 'screen usage: 100%'. The software's title bar and menu options are visible at the top of the window.</p> <p>Screenshot of Bandwidth Profiler simultaneously displaying screen usage and network usage.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 1	Reference/Combination
	 <p>Screenshot of NTT DoCoMo, Inc. i-mode HTML Simulator in a separate display showing screen and network usage. It can display simultaneously with the Bandwidth Profiler.</p> <p>For example, the Bandwidth Profiler in Flash MX Professional 2004 displays simultaneously a bar chart of the Flash application's bandwidth utilization and a Flash Player window of the Flash application's screen utilization as is running. Each relates to a different resource.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p data-bbox="380 606 786 632"><i>[Flash MX 2004 Using Flash</i>, pp. 38–39]</p> <p data-bbox="380 634 1414 716">The Flash Player attempts to meet the frame rate you set; the actual frame rate during playback can vary on different computers. If a document that is downloading reaches a particular frame before the frame's required data has downloaded, the document pauses until the data arrives. [¶]</p> <p data-bbox="380 745 1463 856">To view downloading performance graphically, you can use the Bandwidth Profiler, which shows how much data is sent for each frame according to the modem speed you specify. The Bandwidth Profiler is divided into two panes. The left pane shows information about the document, the download settings, the state, and streams, if any are included. The right pane shows information about individual frames in the document. [¶]</p> <p data-bbox="380 886 1463 997">In simulating the downloading speed, Flash uses estimates of typical Internet performance, not the exact modem speed. For example, if you choose to simulate a modem speed of 28.8 Kbps, Flash sets the actual rate to 2.3 Kbps to reflect typical Internet performance. The profiler also compensates for the added compression support for SWF files, which reduces the file size and improves streaming performance. [¶]</p> <p data-bbox="380 1026 1463 1194">When external SWF files, GIF and XML files, and variables are streamed into a player by using ActionScript calls such as loadMovie and getUrl, the data flows at the rate set for streaming. The stream rate for the main SWF file is reduced based on the reduction of bandwidth caused by the additional data requests. It's helpful to test your document at each speed you intend to support, and on each computer you intend to support. This helps you ensure that the document doesn't overburden the slowest connection and computer it is designed for. [¶]</p> <p data-bbox="380 1224 1442 1278">You can also generate a report of frames that are slowing playback, and then optimize or eliminate some of the content in those frames. See "Optimizing Flash documents" on page 36. [¶]</p> <p data-bbox="380 1308 1442 1365">To change the settings for the SWF file created using the Test Movie and Test Scene commands, use File > Publish Settings. See "Publishing Flash documents" on page 281. [¶]</p> <p data-bbox="380 1394 1463 1503">To test download performance: [¶] Do one of the following: [¶] Select Control > Test Scene or Control > Test Movie. [¶] If you test a scene or document, Flash publishes the current selection as a SWF file using the settings in the Publish Settings dialog box. (See "Publishing Flash documents" on page 281.) The SWF file opens in a new window and begins playing immediately. [¶] Select File > Open, and select a SWF file. [¶]</p>

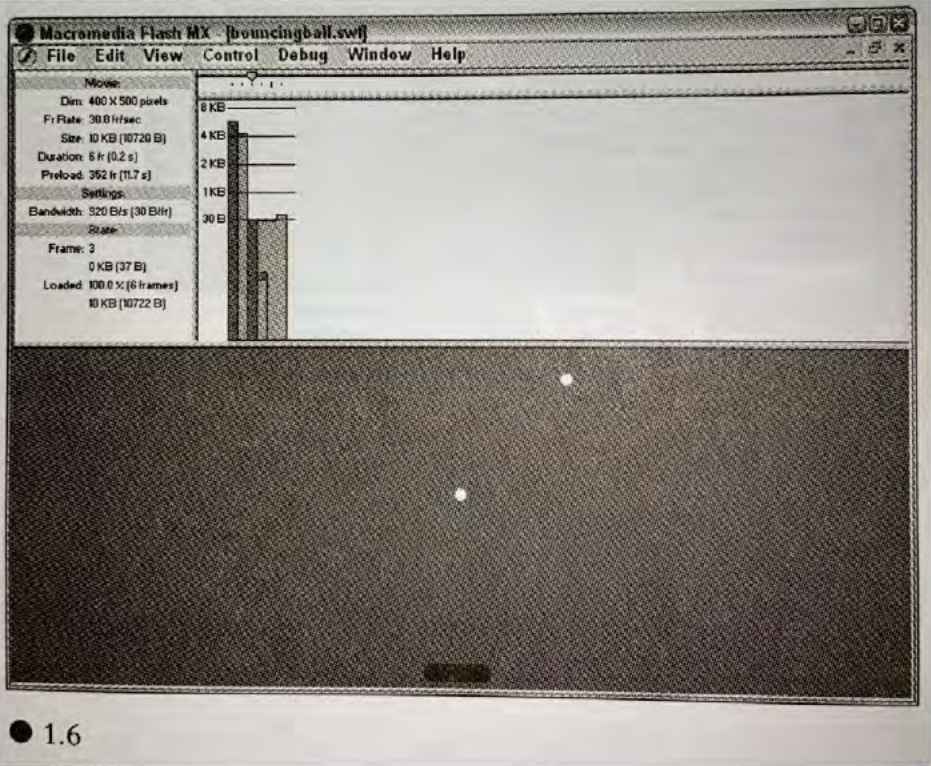
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>Select View > Download Settings, and select a download speed to determine the streaming rate that Flash simulates: 14.4 Kbps, 28.8 Kbps, 56 Kbps, DSL, T1 or a User Setting. To enter your own User Setting, select Customize. [¶]</p> <p>When viewing the SWF file, select View > Bandwidth Profiler to display a graph of the downloading performance. [¶] The left side of the profiler displays information about the document, its settings, its state, and streams, if any are included in the document. [¶] The right section of the profiler shows the Timeline header and graph. In the graph, each bar represents an individual frame of the document. The size of the bar corresponds to that frame's size in bytes. The red line beneath the Timeline header indicates whether a given frame streams in real time with the current modem speed set in the Control menu. If a bar extends above the red line, the document must wait for that frame to load. [¶]</p> <p>Select View > Simulate Download to turn streaming off or on. [¶] If you turn streaming off, the document starts over without simulating a web connection. [¶]</p> <p>Click a bar on the graph to display settings for the corresponding frame in the left window and stop the document. [¶]</p> <p>If necessary, adjust the view of the graph: [¶] Select View > Streaming Graph to show which frames cause pauses. This default view displays alternating light and dark gray blocks representing each frame. The side of each block indicates its relative byte size. The first frame stores a symbol's contents, so it is often larger than other frames. [¶] Select View > Frame by Frame Graph to display the size of each frame. This view helps you see which frames contribute to streaming delays. If any frame block extends above the red line in the graph, the Flash Player halts playback until the entire frame downloads. [¶]</p> <p>Close the test window to return to the normal authoring environment. [¶] Once you've set up a test environment incorporating the Bandwidth Profiler, you can open any SWF file directly in test mode. The file opens in a Flash Player window, using the Bandwidth Profiler and other selected viewing options. [¶] For more information on debugging your documents, see "Writing and Debugging Scripts" in ActionScript Reference Guide Help. [¶]</p>

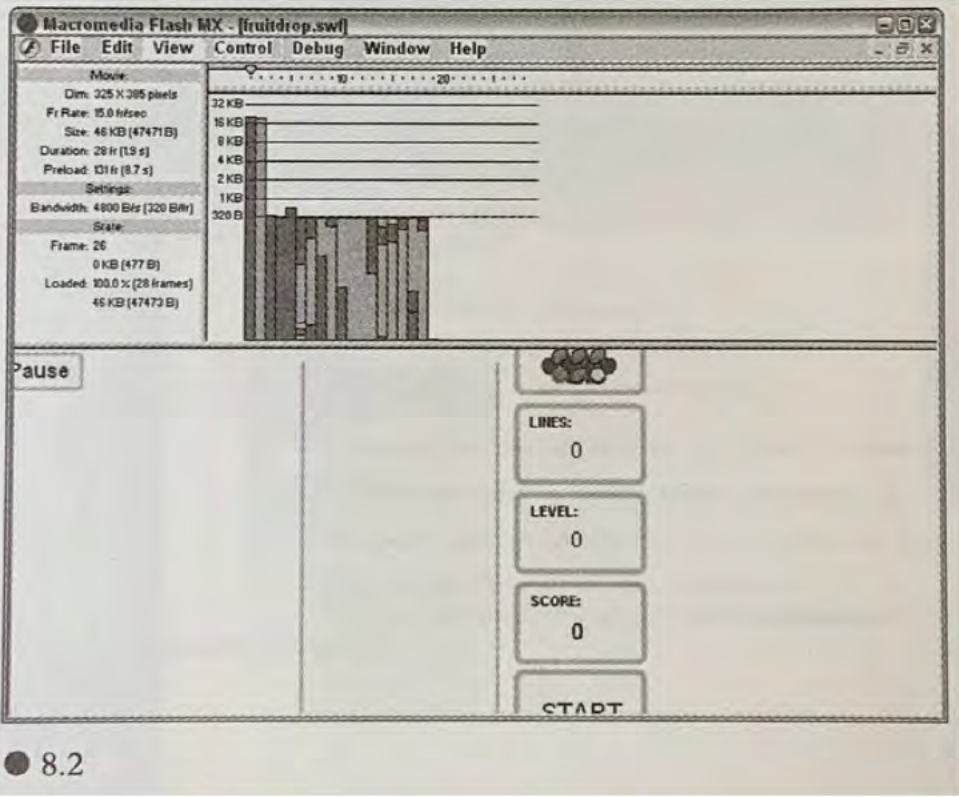
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>To generate a report listing the amount of data in the final Flash Player file: [¶] Select File > Publish Settings and click the Flash tab. [¶] Select Generate Size Report. [¶] Click Publish. [¶]</p> <p>Flash generates a text file with the extension .txt. (If the document file is myMovie.fla, the text file is myMovie Report.txt.) The report lists the size of each frame, shape, text, sound, video and ActionScript script by frame.</p> <p>[Flash MX 2004 Using Flash, p. 390]</p> <p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal.</p> <p>David discloses, via screenshots, the appearance of the Bandwidth Profiler.</p> <p>[David, p. 7]</p>

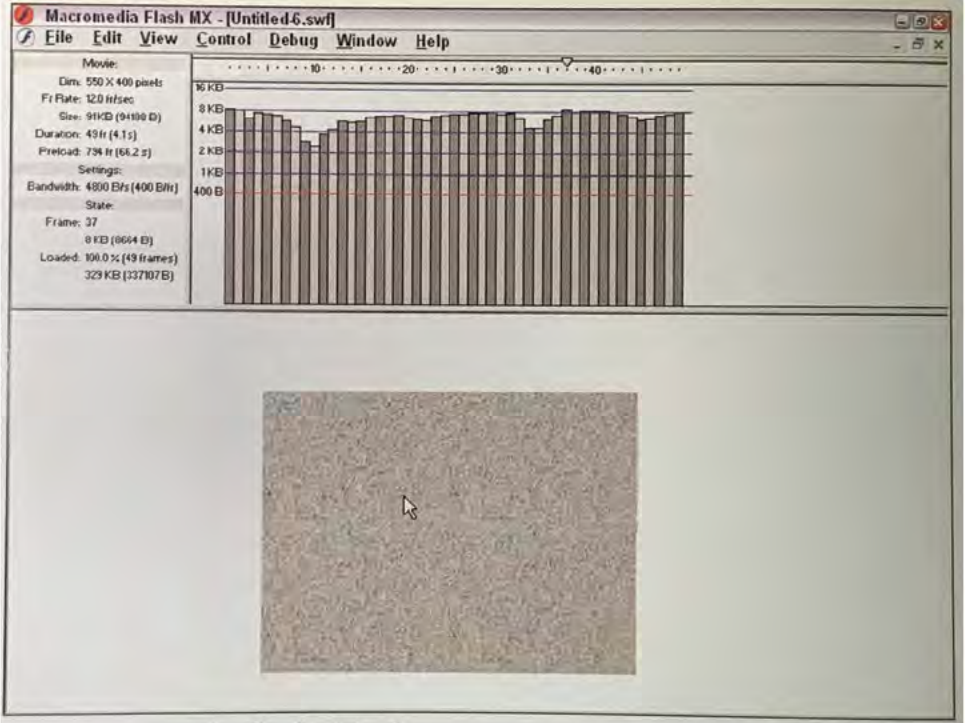
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<div><p>● 1.6</p><p>[David, p. 98]</p></div>

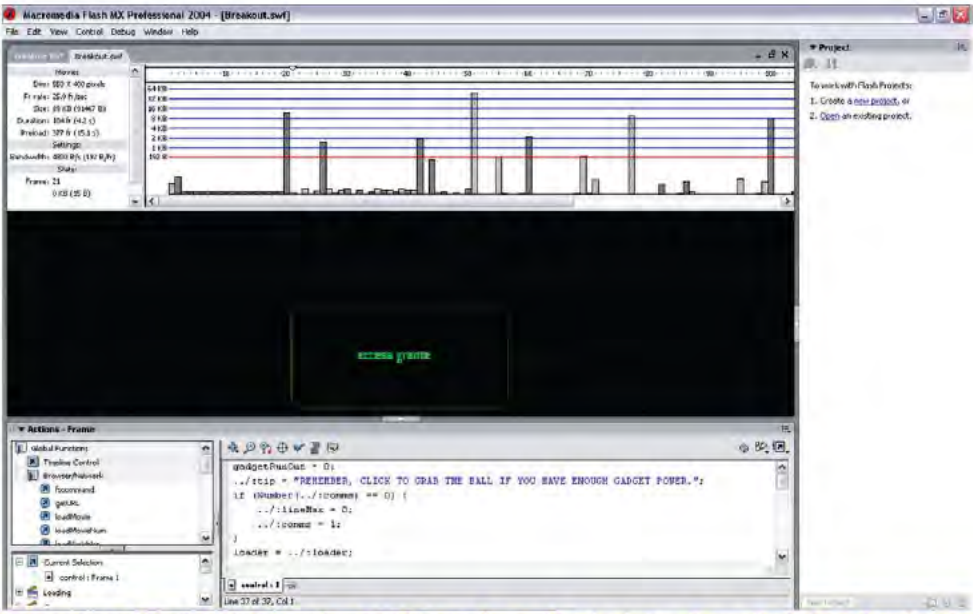
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p>● 8.2</p> <p>[David, #18 of 32 unnumbered pages between pages numbered 192 and 193]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p>The screenshot shows the Macromedia Flash MX Professional 2004 interface. The top menu bar includes File, Edit, View, Control, Debug, Window, and Help. Below the menu is a timeline with a playhead at 40 seconds. The left panel displays movie properties: Dimensions: 550 X 400 pixels, Frame Rate: 12.0 fps, Size: 911KB (94100 B), Duration: 49 fr (4.1 s), Preload: 734 fr (68.2 s), Settings: Bandwidth: 4800 B/s (400 B/fr), State: Frame: 37, 0 KB (0664 B), Loaded: 100.0 % (49 frames), 329 KB (327707 B). The main canvas shows a video player with a textured background and a mouse cursor.</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 1	Reference/Combination
<p>1[h] correspond the utilization of a specific displayed resource at a given time with one or more functions of the application responsible for that utilization.</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p>  <p>Screenshot of Flash MX Professional 2004 interface with "Actions – Frame" window showing the state of the Flash application at frame 21, including an ActionScript script, and indicating the use of bandwidth per frame of the application.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>For example, the Bandwidth Profiler in Flash MX Professional 2004 corresponds the utilization of the displayed bandwidth at a frame (a given time) of the Flash application with the ActionScript, symbols, function calls, and graphical assets (functions of the application) responsible for that utilization.</p> <p>[<i>Flash MX 2004 Using Flash</i>, pp. 38–39]</p> <p>The Flash Player attempts to meet the frame rate you set; the actual frame rate during playback can vary on different computers. If a document that is downloading reaches a particular frame before the frame's required data has downloaded, the document pauses until the data arrives. [¶]</p> <p>To view downloading performance graphically, you can use the Bandwidth Profiler, which shows how much data is sent for each frame according to the modem speed you specify. The Bandwidth Profiler is divided into two panes. The left pane shows information about the document, the download settings, the state, and streams, if any are included. The right pane shows information about individual frames in the document. [¶]</p> <p>In simulating the downloading speed, Flash uses estimates of typical Internet performance, not the exact modem speed. For example, if you choose to simulate a modem speed of 28.8 Kbps, Flash sets the actual rate to 2.3 Kbps to reflect typical Internet performance. The profiler also compensates for the added compression support for SWF files, which reduces the file size and improves streaming performance. [¶]</p> <p>When external SWF files, GIF and XML files, and variables are streamed into a player by using ActionScript calls such as loadMovie and getUrl, the data flows at the rate set for streaming. The stream rate for the main SWF file is reduced based on the reduction of bandwidth caused by the additional data requests. It's helpful to test your document at each speed you intend to support, and on each computer you intend to support. This helps you ensure that the document doesn't overburden the slowest connection and computer it is designed for. [¶]</p> <p>You can also generate a report of frames that are slowing playback, and then optimize or eliminate some of the content in those frames. See "Optimizing Flash documents" on page 36. [¶]</p> <p>To change the settings for the SWF file created using the Test Movie and Test Scene commands, use File > Publish Settings. See "Publishing Flash documents" on page 281. [¶]</p>

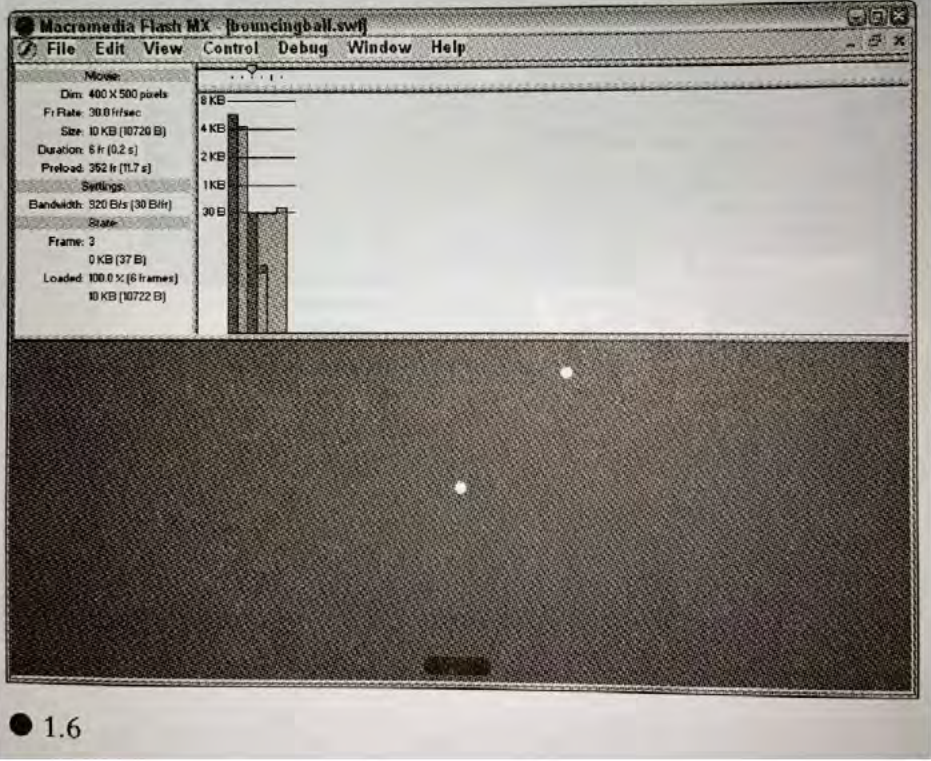
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>To test download performance: [¶] Do one of the following: [¶] Select Control > Test Scene or Control > Test Movie. [¶] If you test a scene or document, Flash publishes the current selection as a SWF file using the settings in the Publish Settings dialog box. (See “Publishing Flash documents” on page 281.) The SWF file opens in a new window and begins playing immediately. [¶] Select File > Open, and select a SWF file. [¶]</p> <p>Select View > Download Settings, and select a download speed to determine the streaming rate that Flash simulates: 14.4 Kbps, 28.8 Kbps, 56 Kbps, DSL, T1 or a User Setting. To enter your own User Setting, select Customize. [¶]</p> <p>When viewing the SWF file, select View > Bandwidth Profiler to display a graph of the downloading performance. [¶] The left side of the profiler displays information about the document, its settings, its state, and streams, if any are included in the document. [¶] The right section of the profiler shows the Timeline header and graph. In the graph, each bar represents an individual frame of the document. The size of the bar corresponds to that frame’s size in bytes. The red line beneath the Timeline header indicates whether a given frame streams in real time with the current modem speed set in the Control menu. If a bar extends above the red line, the document must wait for that frame to load. [¶]</p> <p>Select View > Simulate Download to turn streaming off or on. [¶] If you turn streaming off, the document starts over without simulating a web connection. [¶]</p> <p>Click a bar on the graph to display settings for the corresponding frame in the left window and stop the document. [¶]</p> <p>If necessary, adjust the view of the graph: [¶] Select View > Streaming Graph to show which frames cause pauses. This default view displays alternating light and dark gray blocks representing each frame. The side of each block indicates its relative byte size. The first frame stores a symbol’s contents, so it is often larger than other frames. [¶] Select View > Frame by Frame Graph to display the size of each frame. This view helps you see which frames contribute to streaming delays. If any frame block extends above the red line in the graph, the Flash Player halts playback until the entire frame downloads. [¶]</p> <p>Close the test window to return to the normal authoring environment. [¶] Once you’ve set up a test environment incorporating the Bandwidth Profiler, you can open any SWF file directly in test mode. The file</p>

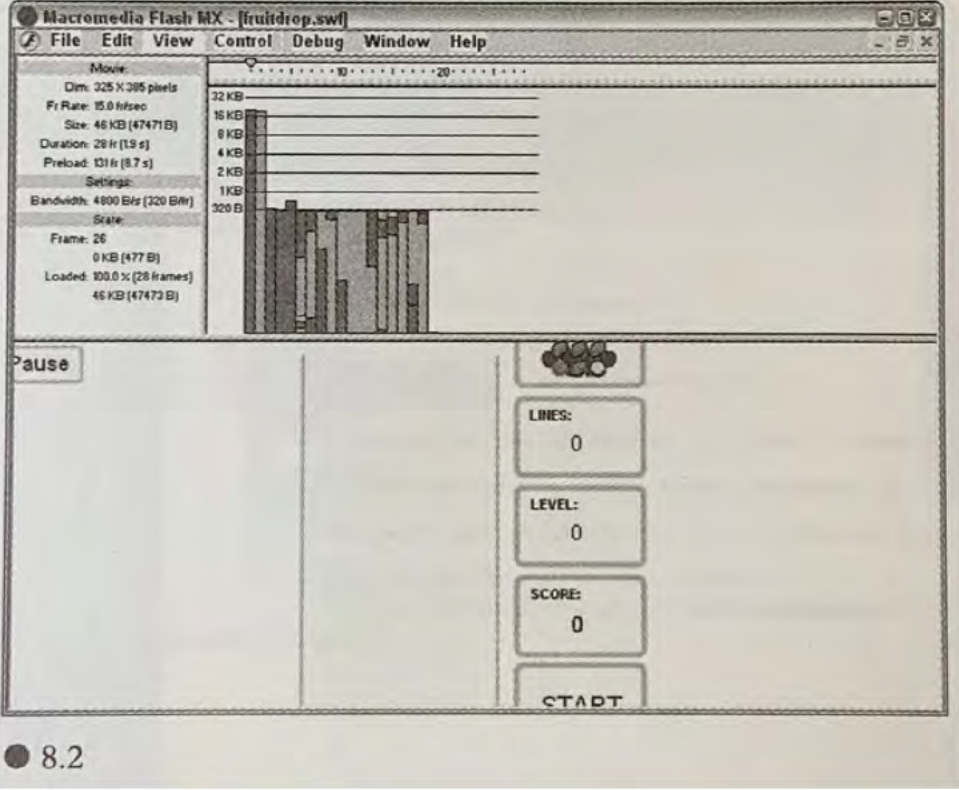
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<p>opens in a Flash Player window, using the Bandwidth Profiler and other selected viewing options. [¶] For more information on debugging your documents, see “Writing and Debugging Scripts” in ActionScript Reference Guide Help. [¶]</p> <p>To generate a report listing the amount of data in the final Flash Player file: [¶] Select File > Publish Settings and click the Flash tab. [¶] Select Generate Size Report. [¶] Click Publish. [¶]</p> <p>Flash generates a text file with the extension .txt. (If the document file is myMovie fla, the text file is myMovie Report.txt.) The report lists the size of each frame, shape, text, sound, video and ActionScript script by frame.</p> <p>[Flash MX 2004 Using Flash, p. 390]</p> <p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal.</p> <p>David discloses, via screenshots, the appearance of the Bandwidth Profiler.</p> <p>[David, p. 7]</p>

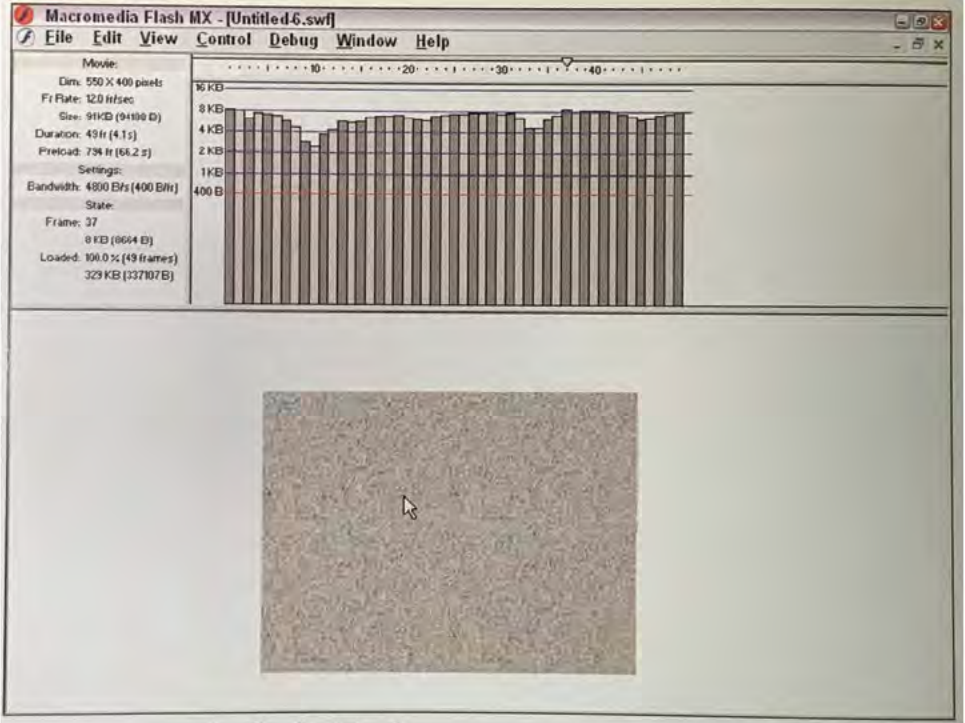
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	<div data-bbox="386 611 1312 1367"></div> <p data-bbox="391 1318 467 1350">● 1.6</p> <p data-bbox="380 1398 516 1423">[David, p. 98]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p>● 8.2</p> <p>[David, #18 of 32 unnumbered pages between pages numbered 192 and 193]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination
	 <p>The screenshot shows the Macromedia Flash MX Professional 2004 interface. The top menu bar includes File, Edit, View, Control, Debug, Window, and Help. The main workspace is divided into two sections. The top section displays a timeline with a vertical axis on the left labeled from 400 B to 16 KB. The timeline itself shows a series of vertical bars representing data distribution over time, with a red playhead at the 40-second mark. The bottom section is a video player showing a grainy, low-resolution image of a textured surface, with a mouse cursor pointing at it.</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 1	Reference/Combination


Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 2	Reference/Combination
<p>2[a] The medium of claim 1, wherein the instructions initiate transmission of the application that is being developed to one or more physical versions of a mobile device corresponding to the selected mobile device model.</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p> <p>For example, Flash MX Professional 2004 initiates transmission of the Flash application that is being developed to the physical version of the mobile device, such as an actual 505i phone, using desktop-to-phone synchronization software.</p> <p>[Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines, p. 49] Select File > Publish to save the SWF file as FlashLiteTest.swf. ¶ In the mobile phone web browser or from a desktop that can transfer a file using desktop-to-phone synchronization software, transfer the file to the mobile phone and verify that it works correctly.</p> <p>[Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines, p. 51] Test your Macromedia Flash Lite 1.1 SWF content frequently on actual mobile phones. This step may seem obvious, but it is often overlooked. It is especially important when you develop Flash Lite 1.1 SWF files for mobile phones. No matter how much phone emulation you do, the final delivery remains the most important part of the development cycle. Emulation is helpful for much of the testing, but it is no substitute for testing on actual mobile phones.</p> <p>[Flash MX Professional 2004 Flash Lite Authoring Guidelines for the i-mode Service by NTT DoCoMo, p. 21] Test your Flash Lite movies frequently on actual 505i phones. This advice may sound obvious, but this step is often overlooked and is especially important for developing Flash Lite movies for i-mode phones. No matter how much phone emulation a developer does, the final delivery remains the most important step in the development cycle. Emulation is helpful for much of the testing, but it is no substitute for testing on actual 505i phones. ¶</p> <p>For basic information on how to use Flash MX Professional 2004 to author and preview Flash Lite movies created for playing on phones, please refer to the Macromedia Flash MX Professional 2004 User Guide for Flash Lite. ¶ You should use the following to test your Flash Lite movie for i-mode phones:</p> <ul style="list-style-type: none"> • The test movie Flash Lite Player (invoked during the Test Movie process) • The stand-alone Flash Lite simulator

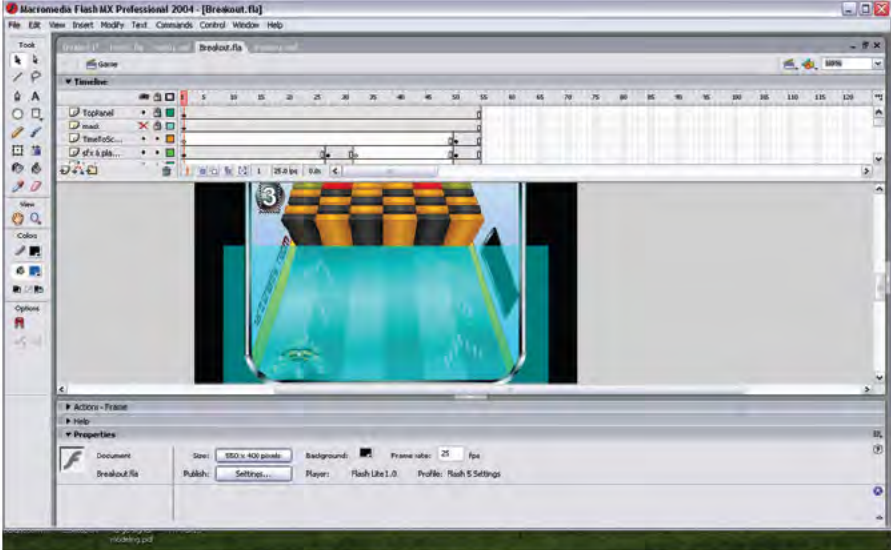
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 2	Reference/Combination
	<ul style="list-style-type: none">• The i-mode HTML Simulator from DoCoMo• Flash Lite on the manufacturer's i-mode phone <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>

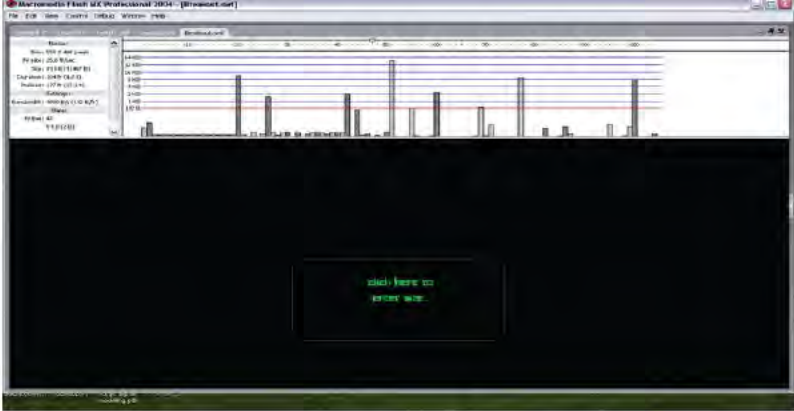
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 4	Reference/Combination
<p>4[a] The medium of claim 2, wherein the one or more characteristics indicative of the mobile device corresponding to the selected mobile device model include at least one of processor type, processor speed, storage access speed, RAM size, storage size, display width, display height, pixel depth, processor availability, RAM availability or storage availability.</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p>  <p>Screenshot of Flash MX Professional 2004 showing simulation speed is set to 12 fps (frames per second).</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 4	Reference/Combination
	<div data-bbox="378 604 1263 1150">The screenshot shows the Macromedia Flash MX Professional 2004 software interface. The main workspace displays a game simulation with a green rectangular area and a row of yellow and black checkered blocks. The timeline at the top indicates a frame rate of 25 fps. The Properties panel at the bottom shows the document size set to 550 x 400 pixels and the frame rate set to 25 fps. The document is named 'Breakout.fla'.</div> <p data-bbox="378 1155 1295 1186">Screenshot showing simulation speed is set to 25 fps, and screen size set to 550 x 400 pixels.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 4	Reference/Combination
	 <p>For example, the Bandwidth Profiler in Flash MX Professional 2004 simulates document/specified frame rate (processor speed), processor availability, and actual frame rate (processor availability).</p> <p>[<i>Flash MX 2004 Using Flash</i>, p. 286]</p> <p>Select Quality options to determine the trade-off between processing time and appearance, as follows. This option sets the QUALITY parameter's value in the object and embed tags. [¶] Low favors playback speed over appearance and does not use anti-aliasing. [¶]</p> <p>Auto Low emphasizes speed at first but improves appearance whenever possible. Playback begins with anti-aliasing turned off. If Flash Player detects that the processor can handle it, anti-aliasing is turned on. [¶] Auto High emphasizes playback speed and appearance equally at first but sacrifices appearance for playback speed if necessary. Playback begins with anti-aliasing turned on. If the actual frame rate drops below the specified frame rate, anti-aliasing is turned off to improve playback speed. Use this setting to emulate the View > Antialias setting in Flash.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 4	Reference/Combination
	<p data-bbox="378 604 751 632">[Flash MX 2004 Using Flash, p. 151]</p> <p data-bbox="378 632 1458 884">The frame rate, the speed at which the animation is played, is measured in number of frames per second. A frame rate that's too slow makes the animation appear to stop and start; a frame rate that's too fast blurs the details of the animation. A frame rate of 12 frames per second (fps) usually gives the best results on the web. QuickTime and AVI movies generally have a frame rate of 12 fps, while the standard motion-picture rate is 24 fps. [¶] The complexity of the animation and the speed of the computer on which the animation is being played affect the smoothness of the playback. Test your animations on a variety of machines to determine optimum frame rates. [¶] Because you specify only one frame rate for the entire Flash document, it's a good idea to set this rate before you begin creating animation. See "Creating or opening a document and setting properties" on page 9.</p> <p data-bbox="378 915 727 942">[Flash MX 2004 Using Flash, p. 9]</p> <p data-bbox="378 942 1425 1026">Creating or opening a document and setting properties [¶] You can create a new document or open a previously saved document as you work in Flash. In Windows, you can use the New File button to open a document of the same type as the last document created. [¶]</p> <p data-bbox="378 1058 1463 1194">To set the size, frame rate, background color, and other properties of a new or existing document, you use the Document Properties dialog box. You can also use the Property inspector to set properties for an existing document. The Property inspector makes it easy to access and change the most commonly used attributes of a document. For more information on the Property inspector, see "Using panels and the Property inspector" in Getting Started Help.</p> <p data-bbox="378 1226 740 1253">[Flash MX 2004 Using Flash, p. 10]</p> <p data-bbox="378 1253 1401 1390">To set properties for a new or existing document in the Document Properties dialog box: [¶] 1 With the document open, select Modify > Document. [¶] The Document Properties dialog box appears. [¶] 2 For Frame Rate, enter the number of animation frames to be displayed every second. For most computer-displayed animations, especially those playing from a website, 8 fps (frames per second) to 12 fps is sufficient (12 fps is the default frame rate).</p> <p data-bbox="378 1421 740 1449">[Flash MX 2004 Using Flash, p. 38]</p> <p data-bbox="378 1449 1320 1501">The Flash Player attempts to meet the frame rate you set; the actual frame rate during playback can vary on different computers.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 4	Reference/Combination
	<p data-bbox="378 632 753 659">[Flash MX 2004 Using Flash, p. 306]</p> <p data-bbox="378 659 1461 772">(Optional) Specifies the level of anti-aliasing to be used during playback of your application. Because anti-aliasing requires a faster processor to smooth each frame of the SWF file before it is rendered on the viewer's screen, select a value based on whether speed or appearance is your top priority: [¶] Low favors playback speed over appearance and never uses anti-aliasing. [¶]</p> <p data-bbox="378 800 1430 856">Autolow emphasizes speed at first but improves appearance whenever possible. Playback begins with anti-aliasing turned off. If Flash Player detects that the processor can handle it, anti-aliasing is turned on. [¶]</p> <p data-bbox="378 884 1445 997">Autohigh emphasizes playback speed and appearance equally at first but sacrifices appearance for playback speed if necessary. Playback begins with anti-aliasing turned on. If the frame rate drops below the specified frame rate, anti-aliasing is turned off to improve playback speed. Use this setting to emulate the Antialias command in Flash (View > Preview Mode > Antialias).</p> <p data-bbox="378 1024 878 1052">[Flash MX 2004 Getting Started with Flash, p. 21]</p> <p data-bbox="378 1052 1461 1165">The Timeline status display at the bottom of the Timeline indicates the selected frame number, the current frame rate, and the elapsed time to the current frame. [¶] Note: When an animation is played, the actual frame rate is displayed; this may differ from the document frame rate if the computer can't display the animation quickly enough.</p> <p data-bbox="378 1192 1153 1220">[Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines, pp. 15–16]</p> <p data-bbox="378 1220 1445 1423">Performance optimization [¶] CPU speed in mobile phones varies among models and is typically much slower than the CPU speed in current desktop computers. Therefore, it is extremely important to consider application performance and optimization from the beginning of each project for creating Flash Lite content created for mobile phones. [¶] Note: In Flash MX Professional 2004, you can find tips on optimizing Flash applications. (Select Help > Using Flash -> Search and enter optimizing movies in the Keyword Searchtext box.) [¶] If you follow the simple guidelines described in this document to author your Flash Lite content, you can create rich and compelling content despite CPU limitations. [¶]</p> <p data-bbox="378 1451 1422 1503">Animation [¶] When creating animated content for a mobile phone, it is important to keep in mind the phone's CPU limitations. The following guidelines can help prevent your Flash Lite content from running</p>


Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 4	Reference/Combination
	<p>slowly: [¶] • If you need to provide intense or complex animation, experiment with changing the quality setting of the content. The default quality setting is Medium. [¶] To change the quality setting in Flash MX Professional 2004, select File > Publish Settings, and select the HTML tab. Select a quality setting from the Quality pop-up menu. [¶] Because changing the quality setting might noticeably affect the visual quality of the Flash Lite content, make sure to thoroughly test the SWF file.</p> <p>[Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines, p. 19]</p> <p>Device speed and frames per second [¶] If the project contains static images, it's not likely that the device processor speed will be an issue. The complexity of Flash requires some important trade-offs when developing content for mobile phones. Until mobile phones have faster processors and there are improvements to other internal components, you must make adjustments to provide an experience that does not appear sluggish to users; otherwise, they won't use the application. [¶] Try to avoid full-screen wipes, fades, and animations. Remember that updating many pixels at a time can be slow, depending on the content. The performance of your Flash application depends on the number of open applications, available phone memory, processor speed, and screen resolution.</p> <p>[Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines, p. 48]</p> <p>To create a Flash Lite 1.1 compatible SWF file: [¶] 1. In Flash MX Professional 2004, create a new document and name it FlashLiteTest fla. [¶] 2. Select File > Publish Settings, and then the Flash tab. In the Version pop-up menu, select Flash Lite 1.1. Click OK. [¶] 3. From the Property inspector select the Size button, and change your document properties so that width = 240, height = 266, and Frame Rate = 15. Click OK. Make sure to use the appropriate frame rate on the actual devices.</p> <p>[Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines, p. 57]</p> <p>The development kit includes a variety of sample files (FLA and SWF files) that demonstrate many of the concepts and applications that are described in this document. These examples are included to help you create content for mobile phones. The files include capabilities examples, processor detectors, and data-driven examples. Be sure to view the readme.txt file in the folder associated with each sample file.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 4	Reference/Combination
	<p>The Flash Player further monitors RAM size and RAM availability, evidenced by for example setting maximum memory sizes, detecting out-of-memory errors and buffer overruns, and determining the memory used and remaining.</p> <p>[<i>Flash MX 2004 Using Flash</i>, p. 280] Buffer overrun protection prevents the intentional misuse of external files in a Flash document to overwrite a user's memory or insert destructive code such as a virus. This prevents a Flash document from reading or writing data outside the document's designated memory space on a user's system. Buffer overrun protection is enabled automatically.</p> <p>[<i>Flash MX Professional 2004 Flash Lite Authoring Guidelines for the i-mode Service by NTT DoCoMo</i>, p. 23] Set the run-time memory available to Flash Lite movies running in the i-mode HTML simulator.</p> <p>[<i>Flash MX Professional 2004 Flash Lite Authoring Guidelines for the i-mode Service by NTT DoCoMo</i>, pp. 41 – 42] This appendix lists the possible information, warning, and error messages you might encounter when creating movies for Flash Lite for i-mode. [...] SWFS033 [¶] Not enough memory to perform operation. [¶] The Flash player was unable to get enough memory to finish the operation</p> <p>[<i>Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines</i>, p. 33] The GetFreePlayerMemory() function returns the amount of memory, in kilobytes, currently available to Flash Lite. [...] The GetTotalPlayerMemory() function returns the total amount of memory, in kilobytes, allocated to Flash Lite.</p> <p>Characteristics indicative of the mobile device include display width and display height (stage size).</p> <p>[Perry] These templates take the guess work out of developing Macromedia Flash content for specific platforms. They set the correct stage size, load a full-size image of the specific device in a guide layer, and preset the</p>


Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 4	Reference/Combination
	<p>correct Flash publishing settings. All you need to do is to create the content based on the development kit recommendations for each platform.</p> <p>[<i>Flash MX 2004 Getting Started with Flash</i>, p. 49]</p> <p>Configuring document properties is a common first step in authoring. You can use the Property inspector to specify settings that affect the entire application, such as the frames per second (fps) playback rate, and the Stage size and background color. [¶]</p> <p>If the Property inspector isn't open, select Window > Properties. [¶]</p>  <p>Characteristics indicative of the mobile device include color depth (pixel depth).</p> <p>[<i>Flash MX 2004 Using Flash</i>, p. 317]</p> <p>Format selects a color depth. Options are black-and-white; 4-, 8-, 16-, or 24-bit color; and 32-bit color with alpha (transparency).</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 4	Reference/Combination
	system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

’811 Claim 5	Reference/Combination
<p>5[a] The medium of claim 4, wherein the monitored resources include processor usage, RAM usage and network usage.</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p>  <p>Screenshot of Flash MX Professional 2004 showing RAM and/or network usage.</p> <p>For example, Flash MX Professional 2004 monitors processor usage. See above disclosure of simulating processor speed and availability. Simulating these characteristics inherently requires monitoring usage.</p> <p>For example, Flash MX Professional 2004 monitors RAM usage. See above disclosure of simulating RAM size and availability. Simulating these characteristics inherently requires monitoring usage.</p> <p>For example, the Bandwidth Profiler in Flash MX Professional 2004 monitors bandwidth usage (network usage).</p> <p>[Flash MX 2004 Using Flash, pp. 38–39]</p> <p>The Flash Player attempts to meet the frame rate you set; the actual frame rate during playback can vary on different computers. If a document that is downloading reaches a particular frame before the frame’s required data has downloaded, the document pauses until the data arrives. [¶]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 5	Reference/Combination
	<p>To view downloading performance graphically, you can use the Bandwidth Profiler, which shows how much data is sent for each frame according to the modem speed you specify. The Bandwidth Profiler is divided into two panes. The left pane shows information about the document, the download settings, the state, and streams, if any are included. The right pane shows information about individual frames in the document. [¶]</p> <p>In simulating the downloading speed, Flash uses estimates of typical Internet performance, not the exact modem speed. For example, if you choose to simulate a modem speed of 28.8 Kbps, Flash sets the actual rate to 2.3 Kbps to reflect typical Internet performance. The profiler also compensates for the added compression support for SWF files, which reduces the file size and improves streaming performance. [¶]</p> <p>When external SWF files, GIF and XML files, and variables are streamed into a player by using ActionScript calls such as loadMovie and getUrl, the data flows at the rate set for streaming. The stream rate for the main SWF file is reduced based on the reduction of bandwidth caused by the additional data requests. It's helpful to test your document at each speed you intend to support, and on each computer you intend to support. This helps you ensure that the document doesn't overburden the slowest connection and computer it is designed for. [¶]</p> <p>You can also generate a report of frames that are slowing playback, and then optimize or eliminate some of the content in those frames. See "Optimizing Flash documents" on page 36. [¶]</p> <p>To change the settings for the SWF file created using the Test Movie and Test Scene commands, use File > Publish Settings. See "Publishing Flash documents" on page 281. [¶]</p> <p>To test download performance: [¶] Do one of the following: [¶] Select Control > Test Scene or Control > Test Movie. [¶] If you test a scene or document, Flash publishes the current selection as a SWF file using the settings in the Publish Settings dialog box. (See "Publishing Flash documents" on page 281.) The SWF file opens in a new window and begins playing immediately. [¶] Select File > Open, and select a SWF file. [¶]</p> <p>Select View > Download Settings, and select a download speed to determine the streaming rate that Flash simulates: 14.4 Kbps, 28.8 Kbps, 56 Kbps, DSL, T1 or a User Setting. To enter your own User Setting, select Customize. [¶]</p>

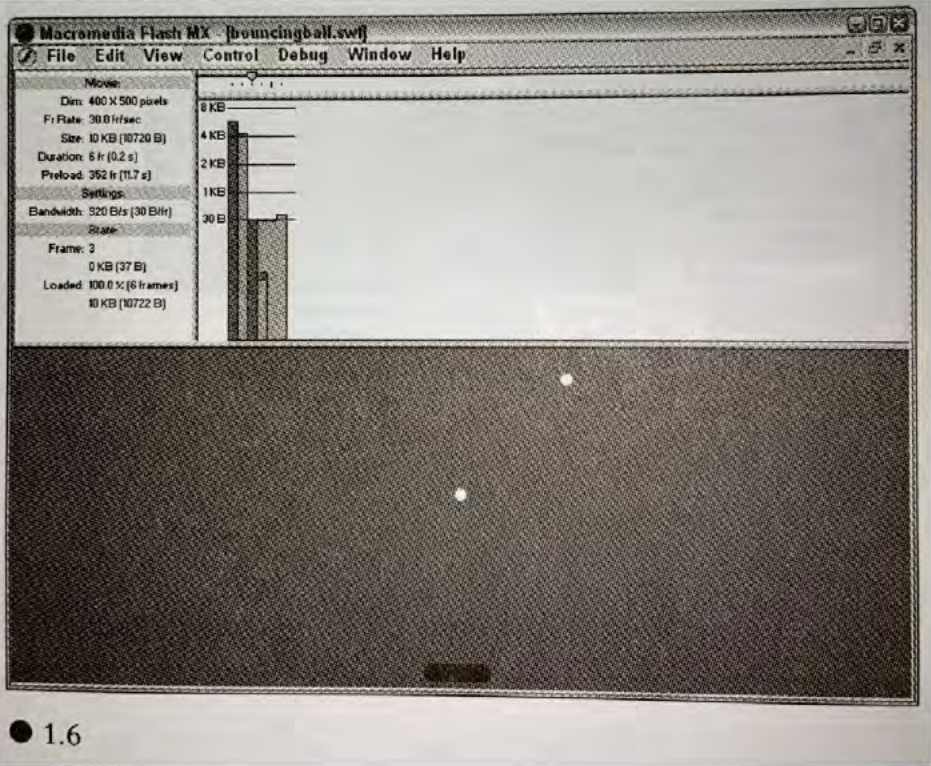
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 5	Reference/Combination
	<p>When viewing the SWF file, select View > Bandwidth Profiler to display a graph of the downloading performance. [¶] The left side of the profiler displays information about the document, its settings, its state, and streams, if any are included in the document. [¶] The right section of the profiler shows the Timeline header and graph. In the graph, each bar represents an individual frame of the document. The size of the bar corresponds to that frame's size in bytes. The red line beneath the Timeline header indicates whether a given frame streams in real time with the current modem speed set in the Control menu. If a bar extends above the red line, the document must wait for that frame to load. [¶]</p> <p>Select View > Simulate Download to turn streaming off or on. [¶] If you turn streaming off, the document starts over without simulating a web connection. [¶]</p> <p>Click a bar on the graph to display settings for the corresponding frame in the left window and stop the document. [¶]</p> <p>If necessary, adjust the view of the graph: [¶] Select View > Streaming Graph to show which frames cause pauses. This default view displays alternating light and dark gray blocks representing each frame. The side of each block indicates its relative byte size. The first frame stores a symbol's contents, so it is often larger than other frames. [¶] Select View > Frame by Frame Graph to display the size of each frame. This view helps you see which frames contribute to streaming delays. If any frame block extends above the red line in the graph, the Flash Player halts playback until the entire frame downloads. [¶]</p> <p>Close the test window to return to the normal authoring environment. [¶] Once you've set up a test environment incorporating the Bandwidth Profiler, you can open any SWF file directly in test mode. The file opens in a Flash Player window, using the Bandwidth Profiler and other selected viewing options. [¶] For more information on debugging your documents, see "Writing and Debugging Scripts" in ActionScript Reference Guide Help. [¶]</p> <p>To generate a report listing the amount of data in the final Flash Player file: [¶] Select File > Publish Settings and click the Flash tab. [¶] Select Generate Size Report. [¶] Click Publish. [¶]</p>

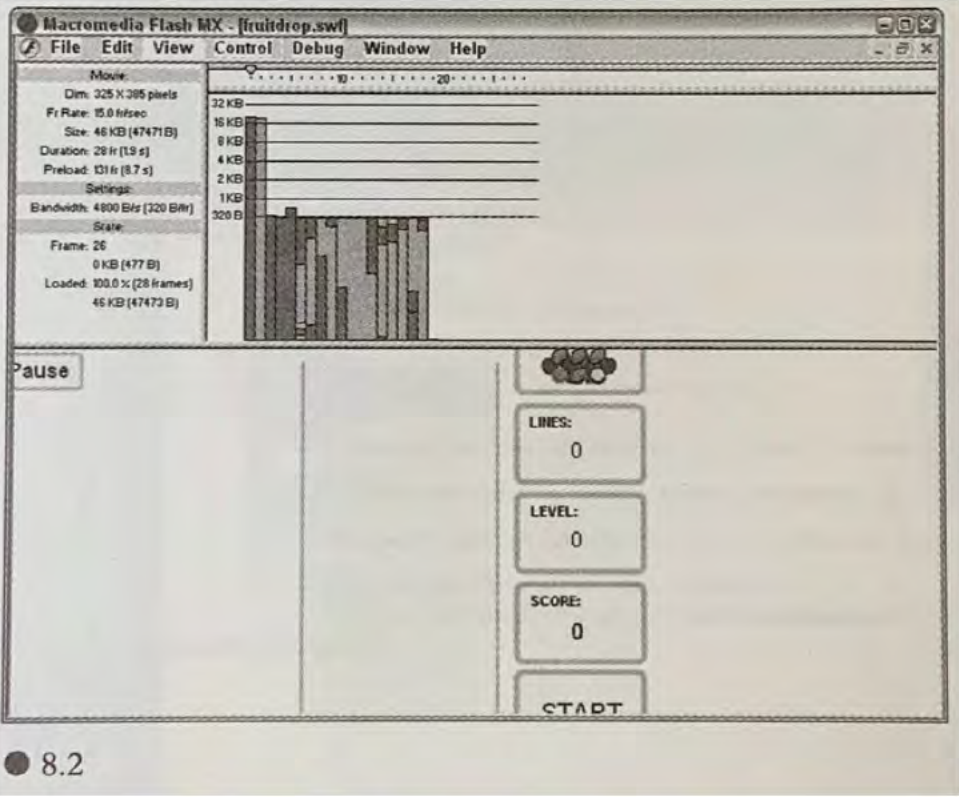
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 5	Reference/Combination
	<p>Flash generates a text file with the extension .txt. (If the document file is myMovie fla, the text file is myMovie Report.txt.) The report lists the size of each frame, shape, text, sound, video and ActionScript script by frame.</p> <p>[Flash MX 2004 Using Flash, p. 390]</p> <p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal.</p> <p>David discloses, via screenshots, the appearance of the Bandwidth Profiler.</p> <p>[David, p. 7]</p>

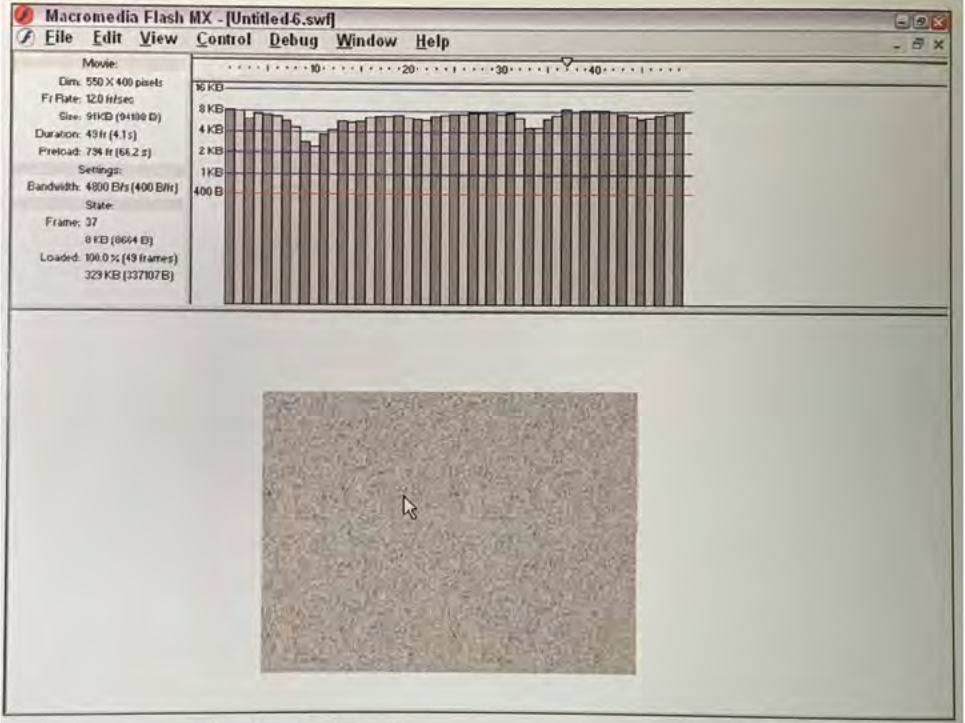
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 5	Reference/Combination
	<div><p>● 1.6</p><p>[David, p. 98]</p></div>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 5	Reference/Combination
	 <p>Macromedia Flash MX - [fruitdrop.swf]</p> <p>File Edit View Control Debug Window Help</p> <p>Movie: Dim: 325 X 285 pixels Fr Rate: 15.0 fps/sec Size: 46 KB (47471 B) Duration: 28 fr (1.9 s) Preload: 131 fr (8.7 s) Settings: Bandwidth: 4800 B/s (320 B/fr) Scale: Frame: 26 0 KB (477 B) Loaded: 100.0 % (28 frames) 46 KB (47473 B)</p> <p>32 KB 16 KB 8 KB 4 KB 2 KB 1 KB 320 B</p> <p>Pause</p> <p>LINES: 0</p> <p>LEVEL: 0</p> <p>SCORE: 0</p> <p>START</p> <p>8.2</p> <p>[David, #18 of 32 unnumbered pages between pages numbered 192 and 193]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 5	Reference/Combination
	 <p>The screenshot shows the Macromedia Flash MX Professional 2004 interface. The title bar reads 'Macromedia Flash MX - [Untitled6.swf]'. The menu bar includes 'File', 'Edit', 'View', 'Control', 'Debug', 'Window', and 'Help'. On the left, a 'Movie' panel displays properties: Dimensions: 550 X 400 pixels, Frame Rate: 12.0 fps, Size: 91 KB (94100 B), Duration: 4.1 s, Preload: 73% (68.2 s), Settings: Bandwidth: 4800 B/s (400 B/it), State: Frame: 37, 0 KB (0664 B), Loaded: 100.0 % (49 frames), 329 KB (337107 B). The main workspace features a timeline at the top with a playhead at 4.0 seconds and a video player below it showing a grainy, textured image.</p> <p>Moreover, concerns about mobile devices' limited CPU, memory, and network speeds pervade the Flash MX Professional 2004 manuals' discussions of developing Flash content for mobile devices.</p> <p>[<i>Flash MX 2004 Using Flash</i>, p. 390]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

’811 Claim 5	Reference/Combination
	<p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal.</p> <p>[<i>Flash MX Professional 2004 Flash Lite User Guide</i>, p. 5] Macromedia has created a new Flash Player version, called Macromedia® Flash™ Lite, that runs on a new class of consumer mobile devices. This format is designed to run optimally on devices with limited resources (memory, processor speed, display area). [...] With Macromedia Flash MX Professional 2004, you can author, preview, publish, and validate content for Flash Lite.</p> <p>[<i>Flash MX Professional 2004 Flash Lite Authoring Guidelines for the i-mode Service by NTT DoCoMo</i>, p. 10] There are limitations on file size and run-time memory usage for Flash Lite movies running on i-mode phones. There is a prescribed limit on how large a web page can be, whether it includes Flash Lite movies or not. For 505i phones, this limit is 20KB. Full details can be found at the DoCoMo website (see Appendix D, “References,” on page 47). This limit applies to an i-mode page’s HTML, SWF content, and all graphic images combined. Web pages larger than this limit cannot be downloaded to an i-mode phone and no error message appears. This limitation also applies to Flash Lite movies played directly in the browser without being embedded in an i-mode compatible HTML file. [¶]</p> <p>The run-time memory available to Flash Lite movies running on i-mode phones is limited and may vary from model to model. Generally, for the 505i phones, this limit is not less than 200KB. Because Flash MX Professional 2004 does not provide a mechanism for checking a phone’s run-time memory consumption, Macromedia strongly recommends that you test all content on actual i-mode phones.</p> <p>[<i>Flash MX Professional 2004 Flash Lite Authoring Guidelines for the i-mode Service by NTT DoCoMo</i>, p. 11] CPU speed in i-mode phones varies from model to model, and is typically much slower than current desktop computers. Therefore, it is extremely important to consider movie performance and optimization from the beginning of each project. The optimization recommendations for creating any Flash movie also apply to Flash Lite movies created for i-mode phones. For the latter, their importance is amplified. [¶] Note: In Flash MX Professional 2004, you can find tips on optimizing Flash movies—select Help > Using Flash -> Search</p>

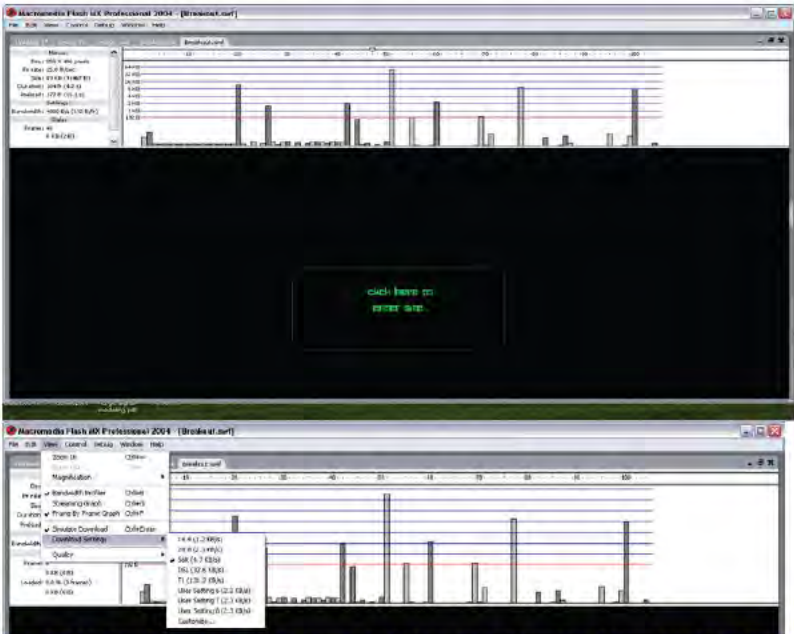
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 5	Reference/Combination
	<p>and enter optimizing movies in the keyword search text box. [¶] If you follow some simple guidelines, as described in this document, to author your movies, you can create rich and compelling content despite CPU limitations.</p> <p>[<i>Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines</i>, p. 17]</p> <p>Flash Lite generally uses vector graphics to define content, which can tax a phone's CPU when rendering complex graphics and animations. In general, the more vectors that are manipulated on the Stage, the more CPU power is required. This is also true for Flash movies delivered on desktop computers. However, a mobile phone is far less powerful than desktop computer, so you should avoid taxing the CPU. [¶]</p> <p>When creating content for mobile phones, it is sometimes better to use bitmaps instead of vectors because they require less CPU power to animate. For example, a road map of a large city would have too many complex shapes to scroll and animate well on a mobile phone if it were created as a vector graphic; a bitmap would work much better. [¶]</p> <p>Using bitmaps produces larger files than using vector images, so take care during development to find the right balance of CPU versus file size and runtime memory requirements. Because of mobile phones' smaller screens, slower data transmission speeds, limited memory, and slower CPU speeds, you should take extra care in planning and testing.</p> <p>[<i>Flash MX Professional 2004 Flash Lite 1.1 Authoring Guidelines</i>, p. 17]</p> <p>Device speed and frames per second [¶] If the project contains static images, it's not likely that the device processor speed will be an issue. The complexity of Flash requires some important trade-offs when developing content for mobile phones. Until mobile phones have faster processors and there are improvements to other internal components, you must make adjustments to provide an experience that does not appear sluggish to users; otherwise, they won't use the application. [¶] Try to avoid full-screen wipes, fades, and animations. Remember that updating many pixels at a time can be slow, depending on the content. The performance of your Flash application depends on the number of open applications, available phone memory, processor speed, and screen resolution.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 5	Reference/Combination
	To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

811 Claim 8	Reference/Combination
<p>8[a] The medium of claim 5, wherein the instructions simulate one or more network events that occur when interacting with a wireless network.</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p>  <p>Flash MX Professional 2004 screenshot showing “Simulate Download” in the Bandwidth Profiler.</p> <p>For example, the Bandwidth Profiler in Flash MX Professional 2004 simulates a download, modem speed, a web connection (a network connection state), compression, streams, typical Internet performance (bandwidth), and additional data requests, network events that occur when interacting with a wireless network.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 8	Reference/Combination
	<p data-bbox="380 606 786 632"><i>[Flash MX 2004 Using Flash</i>, pp. 38–39]</p> <p data-bbox="380 634 1414 716">The Flash Player attempts to meet the frame rate you set; the actual frame rate during playback can vary on different computers. If a document that is downloading reaches a particular frame before the frame's required data has downloaded, the document pauses until the data arrives. [¶]</p> <p data-bbox="380 745 1463 856">To view downloading performance graphically, you can use the Bandwidth Profiler, which shows how much data is sent for each frame according to the modem speed you specify. The Bandwidth Profiler is divided into two panes. The left pane shows information about the document, the download settings, the state, and streams, if any are included. The right pane shows information about individual frames in the document. [¶]</p> <p data-bbox="380 886 1463 997">In simulating the downloading speed, Flash uses estimates of typical Internet performance, not the exact modem speed. For example, if you choose to simulate a modem speed of 28.8 Kbps, Flash sets the actual rate to 2.3 Kbps to reflect typical Internet performance. The profiler also compensates for the added compression support for SWF files, which reduces the file size and improves streaming performance. [¶]</p> <p data-bbox="380 1026 1463 1194">When external SWF files, GIF and XML files, and variables are streamed into a player by using ActionScript calls such as loadMovie and getUrl, the data flows at the rate set for streaming. The stream rate for the main SWF file is reduced based on the reduction of bandwidth caused by the additional data requests. It's helpful to test your document at each speed you intend to support, and on each computer you intend to support. This helps you ensure that the document doesn't overburden the slowest connection and computer it is designed for. [¶]</p> <p data-bbox="380 1224 1442 1278">You can also generate a report of frames that are slowing playback, and then optimize or eliminate some of the content in those frames. See "Optimizing Flash documents" on page 36. [¶]</p> <p data-bbox="380 1308 1442 1365">To change the settings for the SWF file created using the Test Movie and Test Scene commands, use File > Publish Settings. See "Publishing Flash documents" on page 281. [¶]</p> <p data-bbox="380 1394 1463 1503">To test download performance: [¶] Do one of the following: [¶] Select Control > Test Scene or Control > Test Movie. [¶] If you test a scene or document, Flash publishes the current selection as a SWF file using the settings in the Publish Settings dialog box. (See "Publishing Flash documents" on page 281.) The SWF file opens in a new window and begins playing immediately. [¶] Select File > Open, and select a SWF file. [¶]</p>

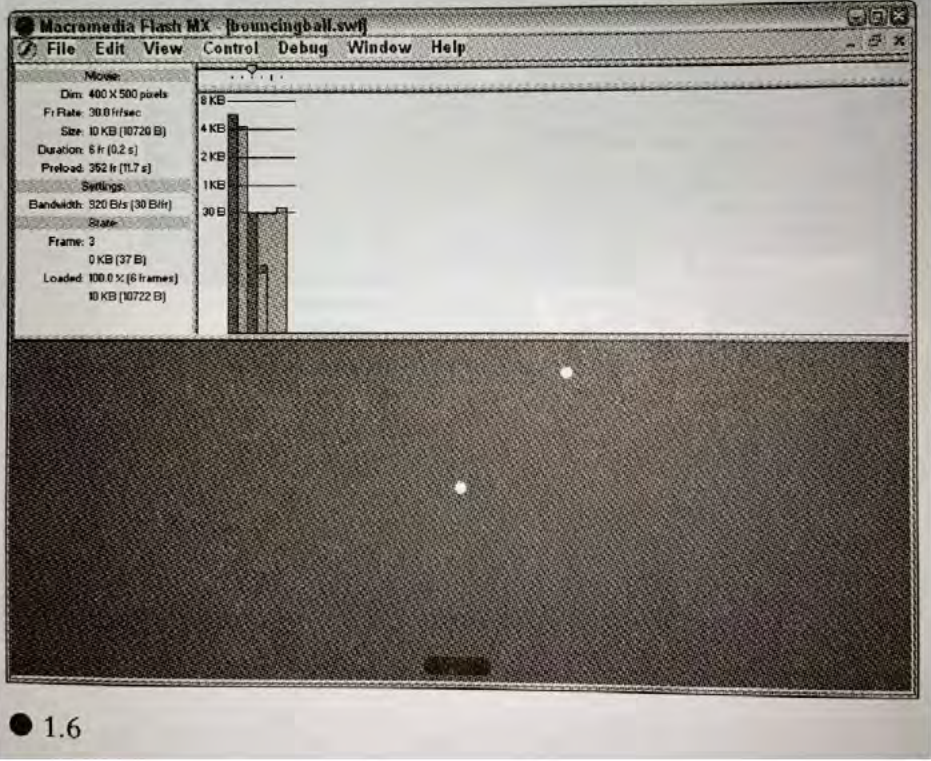
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 8	Reference/Combination
	<p>Select View > Download Settings, and select a download speed to determine the streaming rate that Flash simulates: 14.4 Kbps, 28.8 Kbps, 56 Kbps, DSL, T1 or a User Setting. To enter your own User Setting, select Customize. [¶]</p> <p>When viewing the SWF file, select View > Bandwidth Profiler to display a graph of the downloading performance. [¶] The left side of the profiler displays information about the document, its settings, its state, and streams, if any are included in the document. [¶] The right section of the profiler shows the Timeline header and graph. In the graph, each bar represents an individual frame of the document. The size of the bar corresponds to that frame's size in bytes. The red line beneath the Timeline header indicates whether a given frame streams in real time with the current modem speed set in the Control menu. If a bar extends above the red line, the document must wait for that frame to load. [¶]</p> <p>Select View > Simulate Download to turn streaming off or on. [¶] If you turn streaming off, the document starts over without simulating a web connection. [¶]</p> <p>Click a bar on the graph to display settings for the corresponding frame in the left window and stop the document. [¶]</p> <p>If necessary, adjust the view of the graph: [¶] Select View > Streaming Graph to show which frames cause pauses. This default view displays alternating light and dark gray blocks representing each frame. The side of each block indicates its relative byte size. The first frame stores a symbol's contents, so it is often larger than other frames. [¶] Select View > Frame by Frame Graph to display the size of each frame. This view helps you see which frames contribute to streaming delays. If any frame block extends above the red line in the graph, the Flash Player halts playback until the entire frame downloads. [¶]</p> <p>Close the test window to return to the normal authoring environment. [¶] Once you've set up a test environment incorporating the Bandwidth Profiler, you can open any SWF file directly in test mode. The file opens in a Flash Player window, using the Bandwidth Profiler and other selected viewing options. [¶] For more information on debugging your documents, see "Writing and Debugging Scripts" in ActionScript Reference Guide Help. [¶]</p>

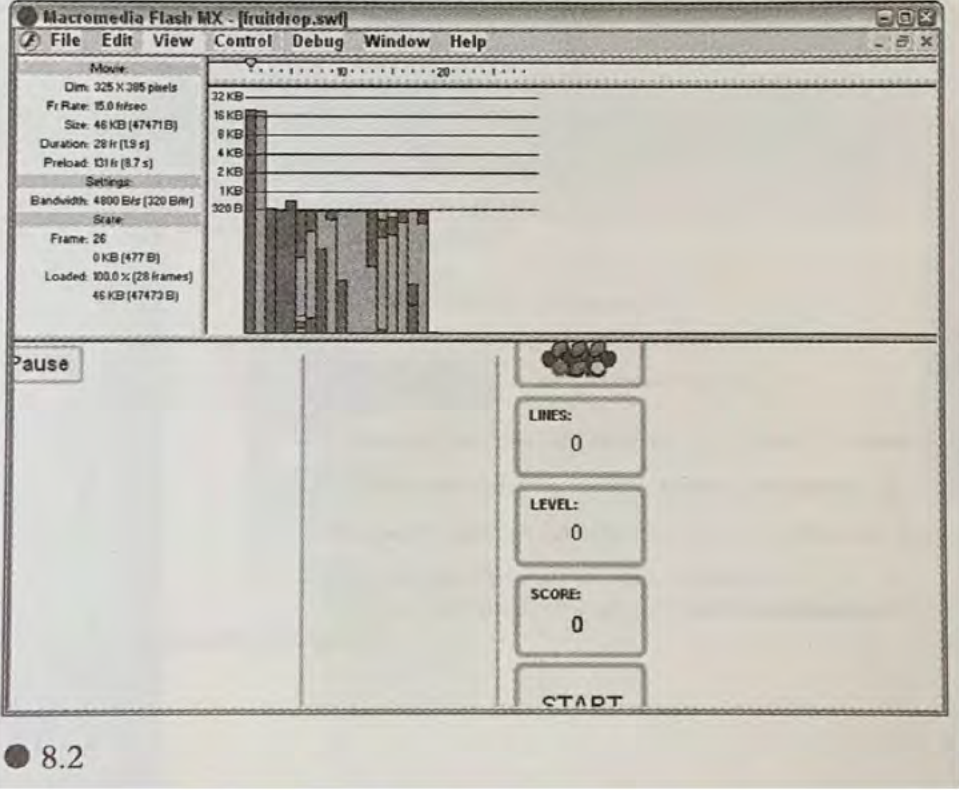
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 8	Reference/Combination
	<p>To generate a report listing the amount of data in the final Flash Player file: [¶] Select File > Publish Settings and click the Flash tab. [¶] Select Generate Size Report. [¶] Click Publish. [¶]</p> <p>Flash generates a text file with the extension .txt. (If the document file is myMovie.fla, the text file is myMovie Report.txt.) The report lists the size of each frame, shape, text, sound, video and ActionScript script by frame.</p> <p>[Flash MX 2004 Using Flash, p. 390]</p> <p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal.</p> <p>David discloses, via screenshots, the appearance of the Bandwidth Profiler.</p> <p>[David, p. 7]</p>

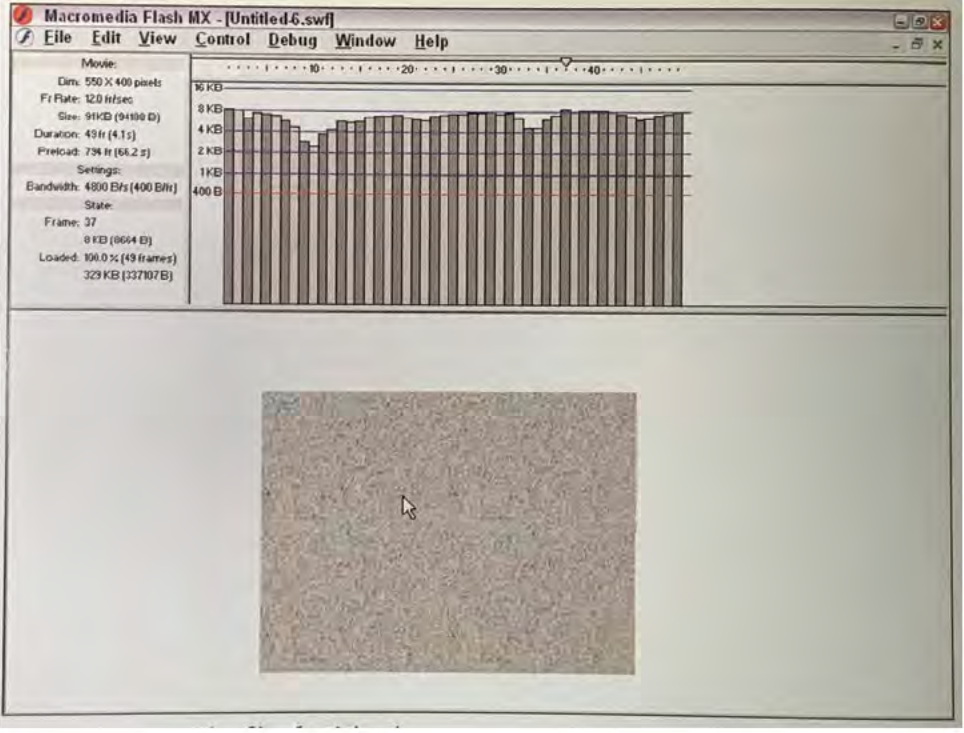
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 8	Reference/Combination
	 <p>● 1.6</p> <p>[David, p. 98]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 8	Reference/Combination
	 <p>● 8.2</p> <p>[David, #18 of 32 unnumbered pages between pages numbered 192 and 193]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 8	Reference/Combination
	 <p>The screenshot shows the Macromedia Flash MX Professional 2004 interface. The title bar reads 'Macromedia Flash MX - [Untitled6.swf]'. The menu bar includes 'File', 'Edit', 'View', 'Control', 'Debug', 'Window', and 'Help'. On the left, a 'Movie' panel displays properties: Dimensions: 550 X 400 pixels; Frame Rate: 12.0 fps; Size: 911KB (94100 B); Duration: 4.1s; Preload: 73% (68.2 s); Settings: Bandwidth: 4800 B/s (400 B/s); State: Frame: 37; 0 KB (0664 B); Loaded: 100.0% (49 frames); 329 KB (337107 B). The main workspace features a timeline at the top with a playhead at 4.0 seconds and a video player below it showing a grainy, textured image.</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 8	Reference/Combination

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

’811 Claim 9	Reference/Combination
<p>9[a] A non-transitory, computer-readable medium comprising software instructions for developing an application to be run on a mobile device, wherein the software instructions, when executed, cause a computer to:</p>	<p>The Flash MX Professional 2004 system discloses this limitation. See disclosures for identical claim limitation 1[a] (hereby incorporated by reference).</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC’s Invalidation Contentions.</p>
<p>9[b] display a list of a plurality of mobile devices from which a user can target a particular device;</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p> <p>For example, Flash MX Professional 2004 displays a list of a plurality of mobile device models from which a user can select, including Nokia 3650, Nokia 9200, Sony CLIE UX50, and iPAQ 5440. Each mobile device includes characteristics indicative of the device such as stage size (screen size), frame rate, a full-size image of the specific device, and the correct Flash publishing settings, including the Flash Player version. Characteristics indicative of the targeted mobile device are modeled when testing the Flash application.</p> <p>[Flash MX 2004 Using Flash, p. 390] Flash content is viewable across multiple browsers, platforms, and mobile phones. You can author the following:</p> <ul style="list-style-type: none"> • High-quality animations • Games • Rich-media custom user interfaces for devices and desktop systems • Immersive e-commerce and business solutions [¶]

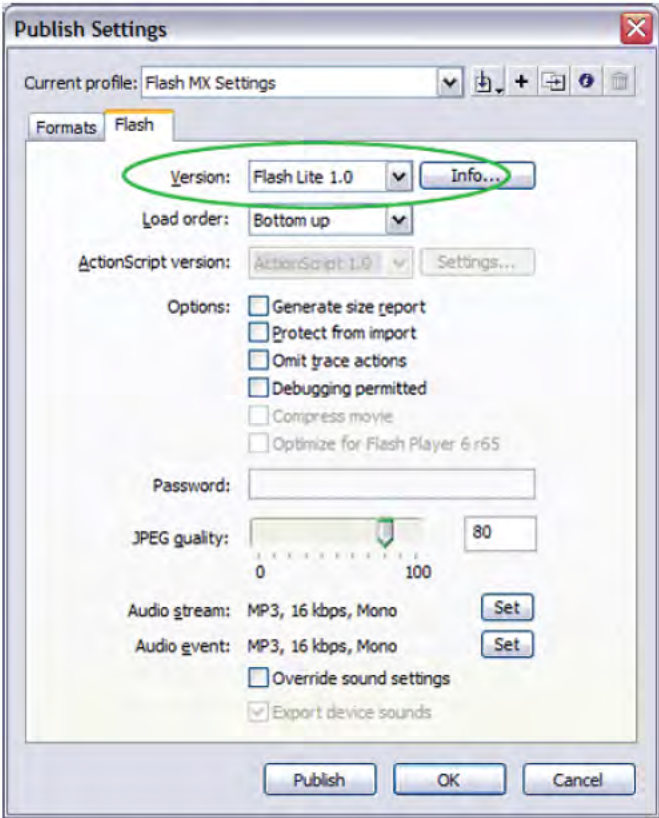
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	<p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal. [¶]</p> <p>The mobile device templates let you create content for many mobile devices available today. Use the device skins in the templates to preview your content as it will look on the device. [¶] Note: The skins are on guide layers and won't export with your content or appear at runtime. [¶] For more information on authoring Flash files for mobile devices, please visit the Macromedia Mobile Devices site at www.macromedia.com/devnet/devices/.</p> <p>[Flash MX 2004 Getting Started with Flash, p. 6] Updated templates[:] Flash includes updated templates for creating presentations, e-learning applications, advertisements, mobile device applications, and other commonly used types of Flash documents. For more information, see "Using templates" in Using Flash Help.</p> <p>[Flash MX 2004 Getting Started with Flash, p. 11] The Start page provides easy access to your most frequently used actions, either at the start of a session or whenever no open documents are in the application window. [¶] The Start page contains the following areas: [¶] Open a Recent Item lets you view your most recent documents. [¶] Open displays the Open File dialog box. [¶] Create New offers a list of file types from which to choose, such as ActionScript or document, for a quick way to open a new file. [¶] Create from Template lists the templates most commonly used to create new documents and allows you to select from the list.</p> <p>[Perry] New Features for Mobile and Devices Developers [¶] Both products offer the new mobile devices templates, however, only Macromedia Flash MX Professional 2004 provides functionality specific to mobile device development: Mobile devices templates MIDI ring tone support Test device emulators Alias text support [¶]</p>

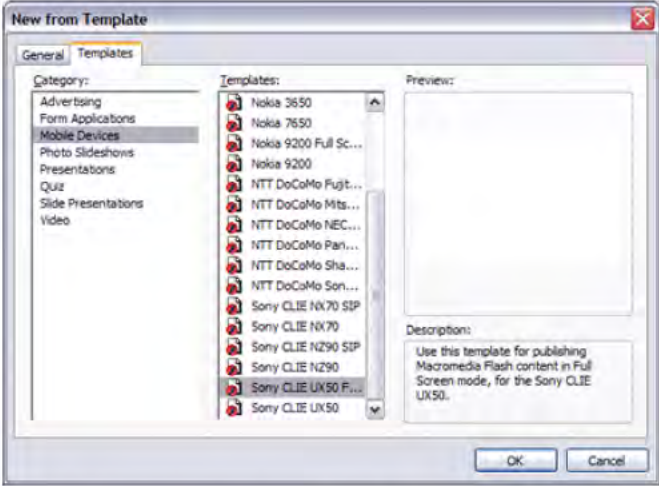
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	<p>In the following section, I'll give you a little more information about these new features and what they mean to you. [¶]</p> <p>Authoring Content for Devices [¶] Exporting Content for Various Versions of Macromedia Flash Player [¶]</p> <p>When authoring for mobile devices, you need to use the correct Macromedia Flash publish settings based on the Macromedia Flash Player requirements of your target device. For more information on some of the devices that play Macromedia Flash content, refer to the Mobile and Devices Developer Center for a list of devices and content development kits for each. [¶]</p> <p>To customize your Macromedia Flash publish settings, you can select an option from the Flash tab of the Publish Settings window. You can access this window in three different ways:</p> <p>Select File > Publish Settings.</p> <p>Press the Settings button on the Property inspector with the Stage selected.</p> <p>Use a keyboard shortcut: Control-Shift-F12. [¶]</p>


Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	<div data-bbox="378 625 1032 1438">The image shows the 'Publish Settings' dialog box from Macromedia Flash. The 'Flash' tab is selected. The 'Current profile' is 'Flash MX Settings'. The 'Version' is set to 'Flash Lite 1.0', which is circled in green. The 'Load order' is 'Bottom up'. The 'ActionScript version' is 'ActionScript 1.0'. There are several unchecked options: 'Generate size report', 'Protect from import', 'Omit trace actions', 'Debugging permitted', 'Compress movie', and 'Optimize for Flash Player 6 r65'. There is a 'Password' field. The 'JPEG quality' is set to 80. The 'Audio stream' and 'Audio event' are both set to 'MP3, 16 kbps, Mono'. There are 'Set' buttons for each audio setting. There are also checkboxes for 'Override sound settings' (unchecked) and 'Export device sounds' (checked). At the bottom are 'Publish', 'OK', and 'Cancel' buttons.</div> <p data-bbox="378 1472 857 1499">Figure 2. Macromedia Flash publish settings. [¶]</p>

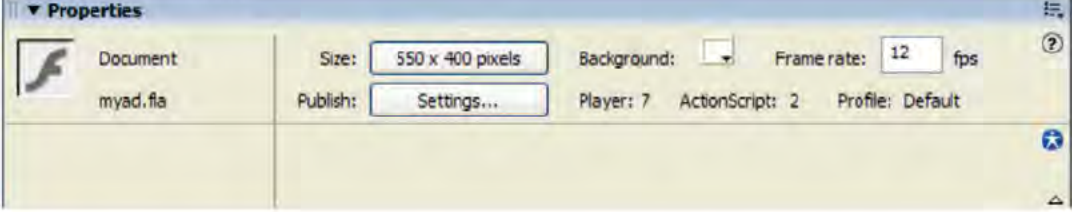
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

811 Claim 9	Reference/Combination
	<p>If you're using the built-in templates for devices, then Flash presets the Flash Player publish settings for each device. However, if you're not using the templates, then you'll need to be ensure that you customize the settings for your device. ¶ The only setting you need to change is the Version setting. Select the proper version of Macromedia Flash Player in the pop-up menu. The rest of the settings are optional and you can refer to the Flash MX Professional 2004 Help panel for additional information on them. [...]</p> <p>Device Templates ¶ New to Macromedia Flash MX Professional 2004 and Macromedia Flash MX 2004 are 22 templates you can use to create content for all of the currently supported mobile devices. You can access them from the Flash start page or by selecting File > New. Click the Template tab in the New from Template dialog box (Figure 6) and select Mobile Devices in the Category pane. ¶</p>  <p>Figure 6. Mobile Devices templates. ¶</p>

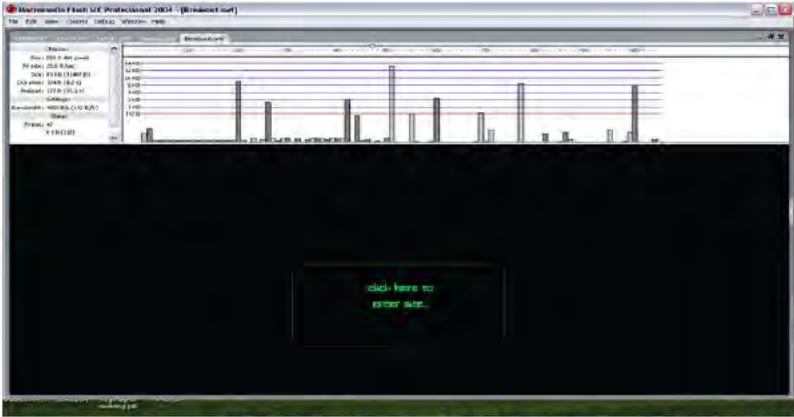
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	<p>These templates take the guess work out of developing Macromedia Flash content for specific platforms. They set the correct stage size, load a full-size image of the specific device in a guide layer, and preset the correct Flash publishing settings. All you need to do is to create the content based on the development kit recommendations for each platform. You can find content development kits for each platform in the Macromedia Mobile and Devices Developer Center. [¶]</p> <p>For example, if you open up the iPAQ 5440 Full Screen template, here's what you will see: [¶]</p>  <p>Figure 7. iPAQ 5440 Full Screen template opened in the authoring environment. [¶]</p> <p>Be sure to use these templates when creating content for mobile devices—they'll definitely save you time.</p> <p>[Flash MX 2004 Getting Started with Flash, p. 49]</p>

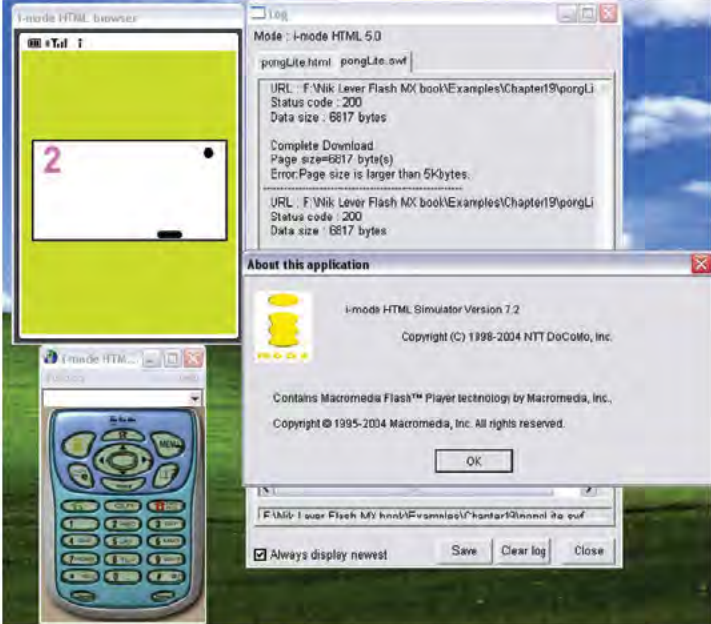
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

811 Claim 9	Reference/Combination
	 <p>The screenshot shows the 'Properties' panel in Flash MX Professional 2004. The document is named 'myad fla'. The size is set to 550 x 400 pixels. The background is a solid color. The frame rate is 12 fps. The publish settings are: Player: 7, ActionScript: 2, Profile: Default. There is a 'Settings...' button next to the publish settings.</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>
9[c] model one or more characteristics indicative of the targeted mobile device;	<p>The Flash MX Professional 2004 system discloses this limitation.</p> <p>For example, Flash MX Professional 2004 displays a list of a plurality of mobile device models from which a user can select, including Nokia 3650, Nokia 9200, Sony CLIE UX50, and iPAQ 5440. Each mobile device includes characteristics indicative of the device such as stage size (screen size), frame rate, a full-size image of the specific device, and the correct Flash publishing settings, including the Flash Player version. Characteristics indicative of the targeted mobile device are modeled when testing the Flash application. See disclosures for claim limitation 9[b] (hereby incorporated by reference).</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

§11 Claim 9	Reference/Combination
<p>9[d] monitor utilization of a plurality of resources over time as the application is running;</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p> <p>See disclosures for identical claim limitation 1[f] (hereby incorporated by reference).</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidation Contentions.</p>
<p>9[e] display simultaneously two or more graphical images of the application's resource utilization as it is running, wherein each graphical image relates to a different resource and is synched in time as the application is running;</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p>  <p>Screenshot of Bandwidth Profiler simultaneously displaying screen usage and network usage.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 9	Reference/Combination
	 <p>Screenshot of NTT DoCoMo, Inc. i-mode HTML Simulator in a separate display showing screen and network usage. It can display simultaneously with the Bandwidth Profiler.</p> <p>For example, the Bandwidth Profiler in Flash MX Professional 2004 displays simultaneously a bar chart of the Flash application's bandwidth utilization and a Flash Player window of the Flash application's screen utilization as is running. The bar chart includes a timeline with a caret indicating the current frame, and the Flash Player window displays the screen usage at the current frame, so they are synced in time as the Flash application is running.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	<p data-bbox="378 632 789 659">[Flash MX 2004 Using Flash, pp. 38–39]</p> <p data-bbox="378 659 1414 743">The Flash Player attempts to meet the frame rate you set; the actual frame rate during playback can vary on different computers. If a document that is downloading reaches a particular frame before the frame's required data has downloaded, the document pauses until the data arrives. [¶]</p> <p data-bbox="378 774 1463 884">To view downloading performance graphically, you can use the Bandwidth Profiler, which shows how much data is sent for each frame according to the modem speed you specify. The Bandwidth Profiler is divided into two panes. The left pane shows information about the document, the download settings, the state, and streams, if any are included. The right pane shows information about individual frames in the document. [¶]</p> <p data-bbox="378 915 1463 1024">In simulating the downloading speed, Flash uses estimates of typical Internet performance, not the exact modem speed. For example, if you choose to simulate a modem speed of 28.8 Kbps, Flash sets the actual rate to 2.3 Kbps to reflect typical Internet performance. The profiler also compensates for the added compression support for SWF files, which reduces the file size and improves streaming performance. [¶]</p> <p data-bbox="378 1056 1463 1224">When external SWF files, GIF and XML files, and variables are streamed into a player by using ActionScript calls such as loadMovie and getUrl, the data flows at the rate set for streaming. The stream rate for the main SWF file is reduced based on the reduction of bandwidth caused by the additional data requests. It's helpful to test your document at each speed you intend to support, and on each computer you intend to support. This helps you ensure that the document doesn't overburden the slowest connection and computer it is designed for. [¶]</p> <p data-bbox="378 1255 1442 1308">You can also generate a report of frames that are slowing playback, and then optimize or eliminate some of the content in those frames. See "Optimizing Flash documents" on page 36. [¶]</p> <p data-bbox="378 1339 1442 1392">To change the settings for the SWF file created using the Test Movie and Test Scene commands, use File > Publish Settings. See "Publishing Flash documents" on page 281. [¶]</p> <p data-bbox="378 1423 1463 1476">To test download performance: [¶] Do one of the following: [¶] Select Control > Test Scene or Control > Test Movie. [¶] If you test a scene or document, Flash publishes the current selection as a SWF file using the</p>

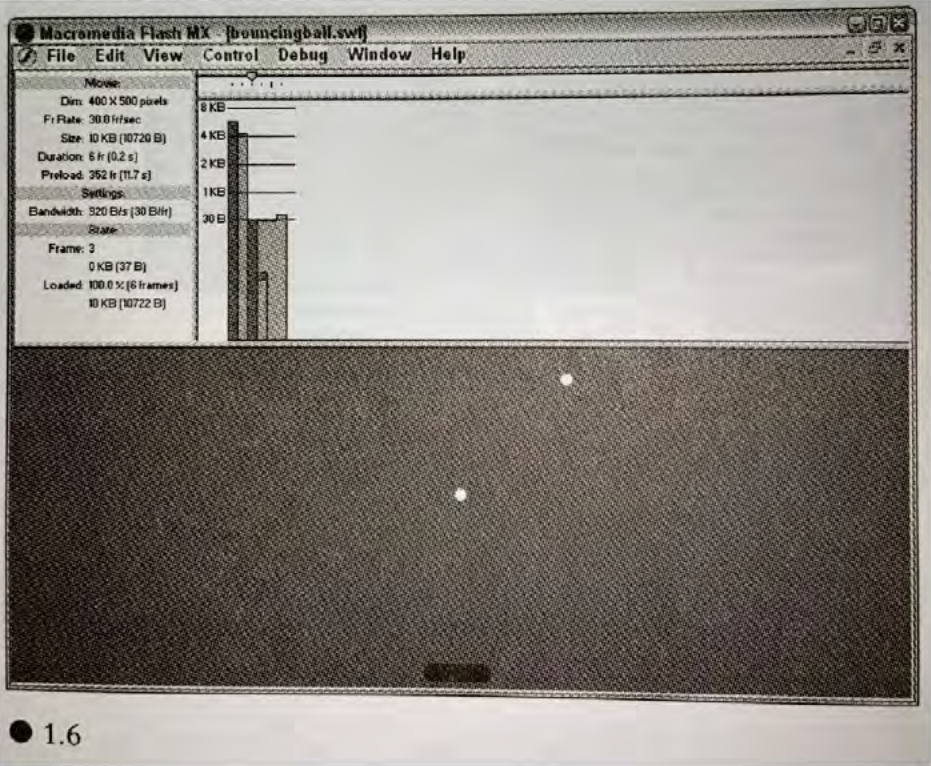
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	<p>settings in the Publish Settings dialog box. (See “Publishing Flash documents” on page 281.) The SWF file opens in a new window and begins playing immediately. [¶] Select File > Open, and select a SWF file. [¶]</p> <p>Select View > Download Settings, and select a download speed to determine the streaming rate that Flash simulates: 14.4 Kbps, 28.8 Kbps, 56 Kbps, DSL, T1 or a User Setting. To enter your own User Setting, select Customize. [¶]</p> <p>When viewing the SWF file, select View > Bandwidth Profiler to display a graph of the downloading performance. [¶] The left side of the profiler displays information about the document, its settings, its state, and streams, if any are included in the document. [¶] The right section of the profiler shows the Timeline header and graph. In the graph, each bar represents an individual frame of the document. The size of the bar corresponds to that frame’s size in bytes. The red line beneath the Timeline header indicates whether a given frame streams in real time with the current modem speed set in the Control menu. If a bar extends above the red line, the document must wait for that frame to load. [¶]</p> <p>Select View > Simulate Download to turn streaming off or on. [¶] If you turn streaming off, the document starts over without simulating a web connection. [¶]</p> <p>Click a bar on the graph to display settings for the corresponding frame in the left window and stop the document. [¶]</p> <p>If necessary, adjust the view of the graph: [¶] Select View > Streaming Graph to show which frames cause pauses. This default view displays alternating light and dark gray blocks representing each frame. The side of each block indicates its relative byte size. The first frame stores a symbol’s contents, so it is often larger than other frames. [¶] Select View > Frame by Frame Graph to display the size of each frame. This view helps you see which frames contribute to streaming delays. If any frame block extends above the red line in the graph, the Flash Player halts playback until the entire frame downloads. [¶]</p> <p>Close the test window to return to the normal authoring environment. [¶] Once you’ve set up a test environment incorporating the Bandwidth Profiler, you can open any SWF file directly in test mode. The file opens in a Flash Player window, using the Bandwidth Profiler and other selected viewing options. [¶] For</p>

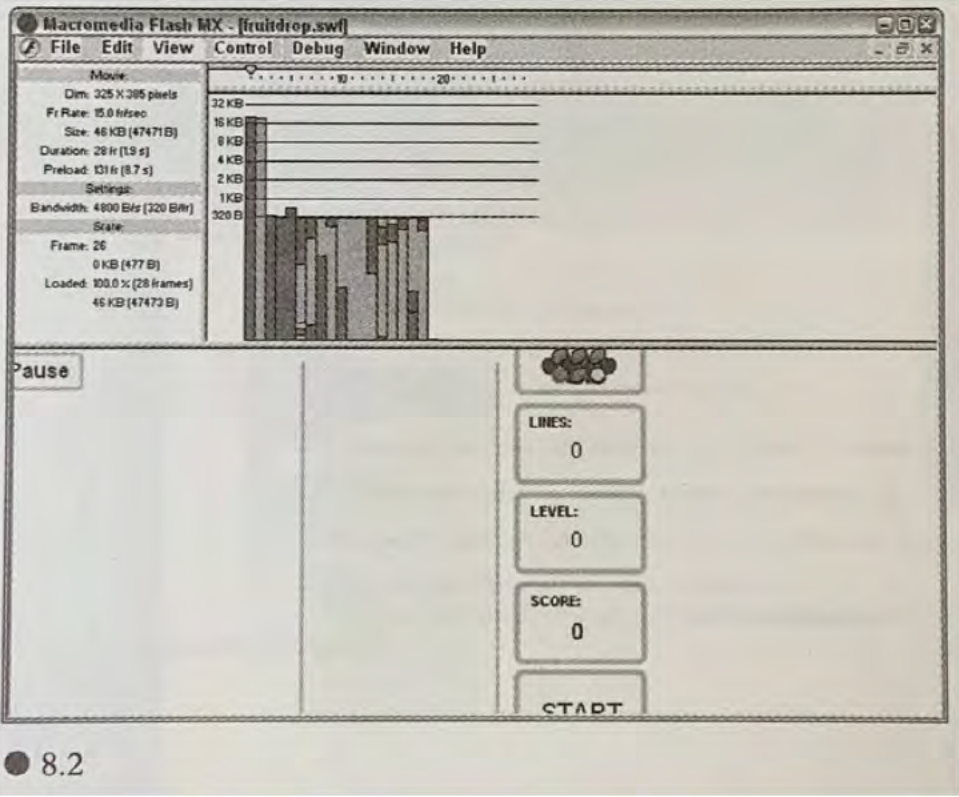
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	<p>more information on debugging your documents, see “Writing and Debugging Scripts” in ActionScript Reference Guide Help. [¶]</p> <p>To generate a report listing the amount of data in the final Flash Player file: [¶] Select File > Publish Settings and click the Flash tab. [¶] Select Generate Size Report. [¶] Click Publish. [¶]</p> <p>Flash generates a text file with the extension .txt. (If the document file is myMovie.fla, the text file is myMovie Report.txt.) The report lists the size of each frame, shape, text, sound, video and ActionScript script by frame.</p> <p>[Flash MX 2004 Using Flash, p. 390]</p> <p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal.</p> <p>David discloses, via screenshots, the appearance of the Bandwidth Profiler.</p> <p>[David, p. 7]</p>

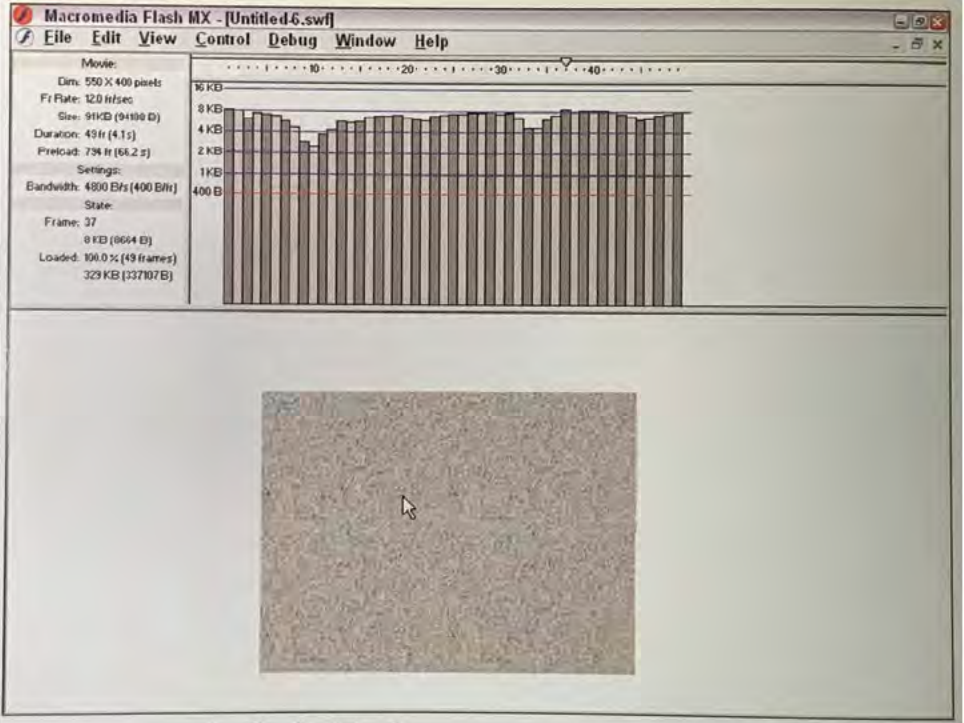
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	<div><p>The screenshot shows the Macromedia Flash MX software interface. The title bar reads 'Macromedia Flash MX - [bouncingball.swf]'. The menu bar includes 'File', 'Edit', 'View', 'Control', 'Debug', 'Window', and 'Help'. On the left, a 'Movie' panel displays properties: 'Dim: 400 X 500 pixels', 'Fr Rate: 30.0 fr/sec', 'Size: 10 KB (10720 B)', 'Duration: 6 fr (0.2 s)', and 'Preload: 352 fr (11.7 s)'. Below this is a 'Settings' section with 'Bandwidth: 520 B/s (30 B/fr)' and a 'State' section with 'Frame: 2', '0 KB (37 B)', and 'Loaded: 100.0 % (6 frames)', '10 KB (10722 B)'. A vertical bar chart on the right shows memory usage levels. The main canvas displays a dark, textured background with a small white dot in the center, representing a bouncing ball. Below the canvas, a small black circle is followed by the number '1.6'. At the bottom left of the interface, the text '[David, p. 98]' is visible.</p></div>

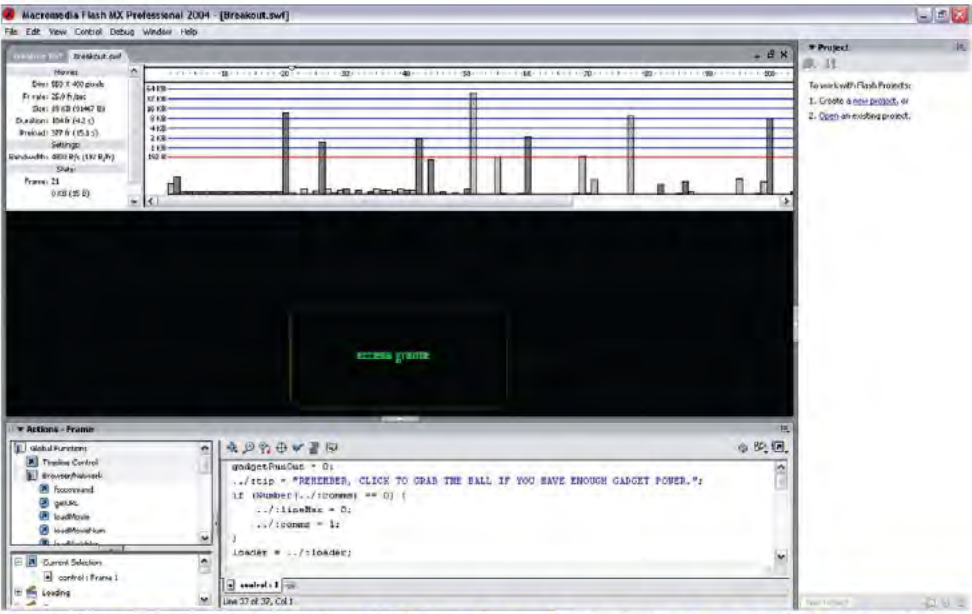
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	 <p data-bbox="386 1423 1136 1451">[David, #18 of 32 unnumbered pages between pages numbered 192 and 193]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	 <p>The screenshot shows the Macromedia Flash MX Professional 2004 interface. The title bar reads 'Macromedia Flash MX - [Untitled6.swf]'. The menu bar includes 'File', 'Edit', 'View', 'Control', 'Debug', 'Window', and 'Help'. On the left, a 'Movie' panel displays properties: Dimensions: 550 X 400 pixels, Frame Rate: 12.0 fps, Size: 91 KB (94100 B), Duration: 49 fr (4.1 s), Preload: 794 fr (66.2 s), Settings: Bandwidth: 4800 B/s (400 B/fr), State: Frame: 37, 0 KB (0664 B), Loaded: 100.0 % (49 frames), 329 KB (327707 B). The main workspace features a timeline at the top with a playhead at frame 40, and a video player below it showing a grainy, textured image with a mouse cursor pointing at it.</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 9	Reference/Combination
<p>9[f] identify one or more functions of the application responsible for utilization of a specific displayed resource at a given time.</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p>  <p>The screenshot displays the Macromedia Flash MX Professional 2004 interface. The main window shows a timeline graph at the top with a red playhead at frame 21. Below the graph is a black stage area with a green text box containing the text "ACTIONSCRIPT". The "Actions - Frame" window is open at the bottom, showing the following ActionScript code:</p> <pre> onClipEvent (Timeline) { gotoAndPlayFromTime (0); if (this._x < 0) { gotoAndPlayFromTime (0); } gotoAndPlayFromTime (0); } </pre> <p>The interface also shows a "Properties" window on the right with the "Timeline" tab selected, displaying the timeline graph. The "Actions - Frame" window is open at the bottom, showing the ActionScript code. The "Properties" window on the right shows the "Timeline" tab selected, displaying the timeline graph.</p> <p>Screenshot of Flash MX Professional 2004 interface with "Actions – Frame" window showing the state of the Flash application at frame 21, including an ActionScript script, and indicating the use of bandwidth per frame of the application.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	<p>For example, the Bandwidth Profiler in Flash MX Professional 2004 identifies the ActionScript, symbols, function calls, and graphical assets (functions of the application) responsible for the utilization of the displayed bandwidth at a frame (a given time) of the Flash application.</p> <p>[<i>Flash MX 2004 Using Flash</i>, pp. 38–39]</p> <p>The Flash Player attempts to meet the frame rate you set; the actual frame rate during playback can vary on different computers. If a document that is downloading reaches a particular frame before the frame's required data has downloaded, the document pauses until the data arrives. [¶]</p> <p>To view downloading performance graphically, you can use the Bandwidth Profiler, which shows how much data is sent for each frame according to the modem speed you specify. The Bandwidth Profiler is divided into two panes. The left pane shows information about the document, the download settings, the state, and streams, if any are included. The right pane shows information about individual frames in the document. [¶]</p> <p>In simulating the downloading speed, Flash uses estimates of typical Internet performance, not the exact modem speed. For example, if you choose to simulate a modem speed of 28.8 Kbps, Flash sets the actual rate to 2.3 Kbps to reflect typical Internet performance. The profiler also compensates for the added compression support for SWF files, which reduces the file size and improves streaming performance. [¶]</p> <p>When external SWF files, GIF and XML files, and variables are streamed into a player by using ActionScript calls such as loadMovie and getUrl, the data flows at the rate set for streaming. The stream rate for the main SWF file is reduced based on the reduction of bandwidth caused by the additional data requests. It's helpful to test your document at each speed you intend to support, and on each computer you intend to support. This helps you ensure that the document doesn't overburden the slowest connection and computer it is designed for. [¶]</p> <p>You can also generate a report of frames that are slowing playback, and then optimize or eliminate some of the content in those frames. See "Optimizing Flash documents" on page 36. [¶]</p> <p>To change the settings for the SWF file created using the Test Movie and Test Scene commands, use File > Publish Settings. See "Publishing Flash documents" on page 281. [¶]</p>

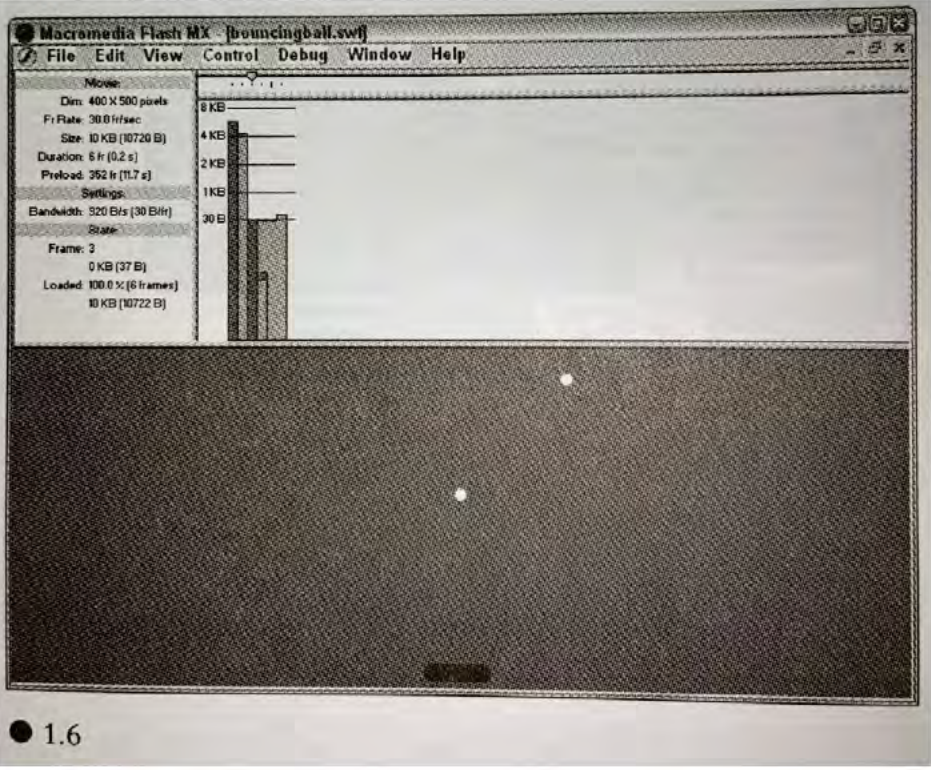
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	<p>To test download performance: [¶] Do one of the following: [¶] Select Control > Test Scene or Control > Test Movie. [¶] If you test a scene or document, Flash publishes the current selection as a SWF file using the settings in the Publish Settings dialog box. (See “Publishing Flash documents” on page 281.) The SWF file opens in a new window and begins playing immediately. [¶] Select File > Open, and select a SWF file. [¶]</p> <p>Select View > Download Settings, and select a download speed to determine the streaming rate that Flash simulates: 14.4 Kbps, 28.8 Kbps, 56 Kbps, DSL, T1 or a User Setting. To enter your own User Setting, select Customize. [¶]</p> <p>When viewing the SWF file, select View > Bandwidth Profiler to display a graph of the downloading performance. [¶] The left side of the profiler displays information about the document, its settings, its state, and streams, if any are included in the document. [¶] The right section of the profiler shows the Timeline header and graph. In the graph, each bar represents an individual frame of the document. The size of the bar corresponds to that frame’s size in bytes. The red line beneath the Timeline header indicates whether a given frame streams in real time with the current modem speed set in the Control menu. If a bar extends above the red line, the document must wait for that frame to load. [¶]</p> <p>Select View > Simulate Download to turn streaming off or on. [¶] If you turn streaming off, the document starts over without simulating a web connection. [¶]</p> <p>Click a bar on the graph to display settings for the corresponding frame in the left window and stop the document. [¶]</p> <p>If necessary, adjust the view of the graph: [¶] Select View > Streaming Graph to show which frames cause pauses. This default view displays alternating light and dark gray blocks representing each frame. The side of each block indicates its relative byte size. The first frame stores a symbol’s contents, so it is often larger than other frames. [¶] Select View > Frame by Frame Graph to display the size of each frame. This view helps you see which frames contribute to streaming delays. If any frame block extends above the red line in the graph, the Flash Player halts playback until the entire frame downloads. [¶]</p> <p>Close the test window to return to the normal authoring environment. [¶] Once you’ve set up a test environment incorporating the Bandwidth Profiler, you can open any SWF file directly in test mode. The file</p>

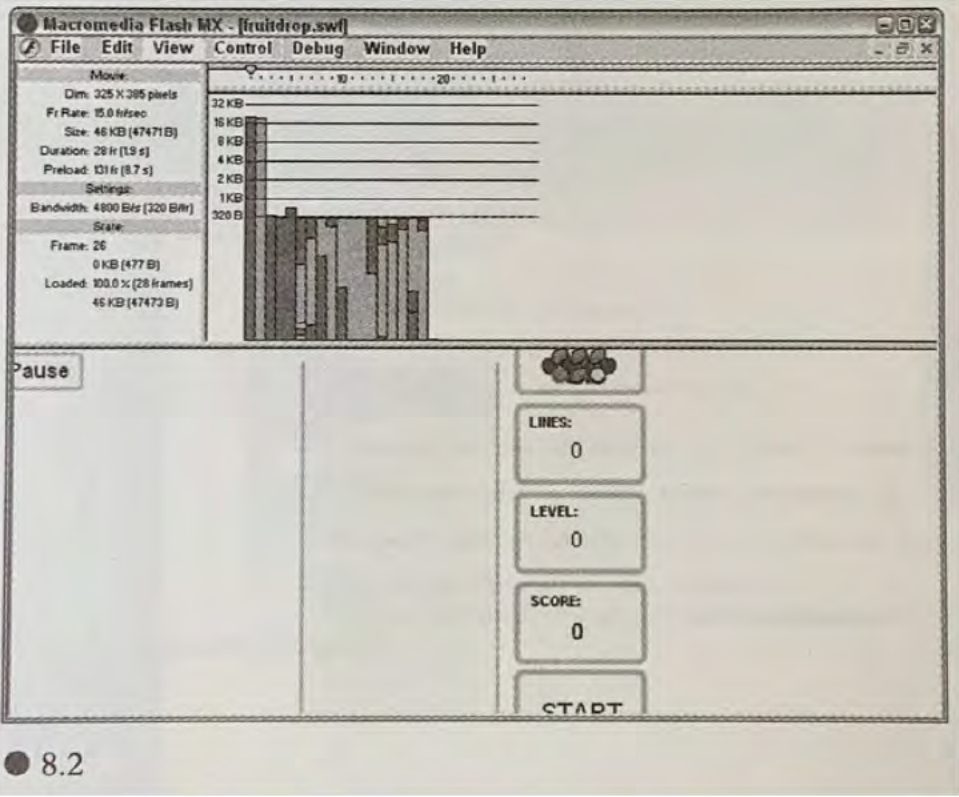
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	<p>opens in a Flash Player window, using the Bandwidth Profiler and other selected viewing options. [¶] For more information on debugging your documents, see “Writing and Debugging Scripts” in ActionScript Reference Guide Help. [¶]</p> <p>To generate a report listing the amount of data in the final Flash Player file: [¶] Select File > Publish Settings and click the Flash tab. [¶] Select Generate Size Report. [¶] Click Publish. [¶]</p> <p>Flash generates a text file with the extension .txt. (If the document file is myMovie.fla, the text file is myMovie Report.txt.) The report lists the size of each frame, shape, text, sound, video and ActionScript script by frame.</p> <p>[Flash MX 2004 Using Flash, p. 390]</p> <p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal.</p> <p>David discloses, via screenshots, the appearance of the Bandwidth Profiler.</p> <p>[David, p. 7]</p>

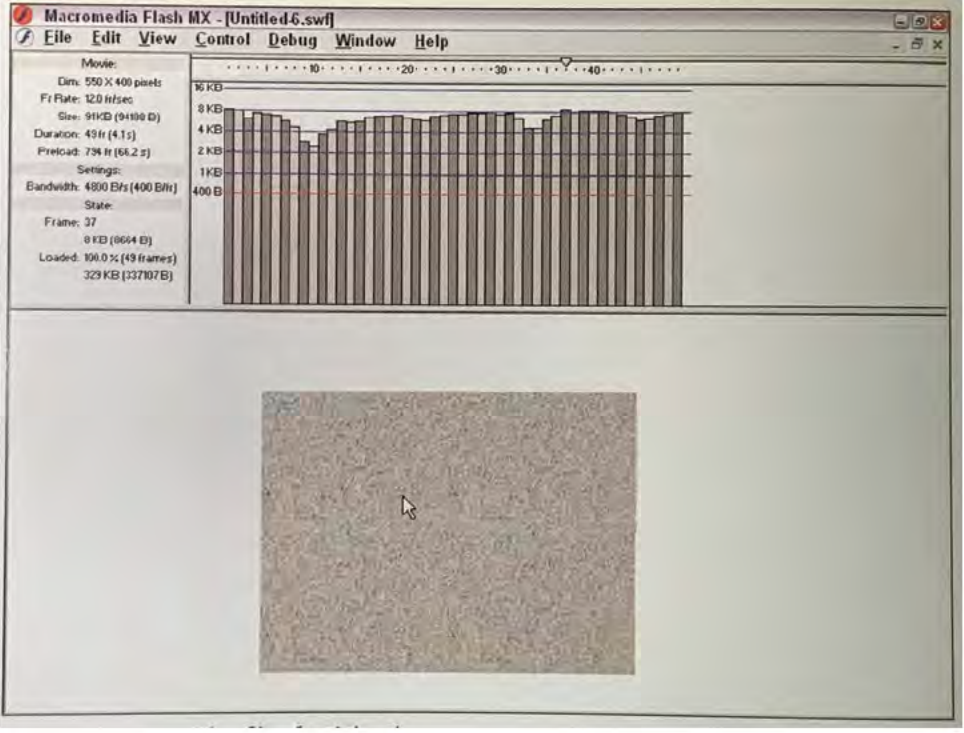
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	 <p>● 1.6</p> <p>[David, p. 98]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	 <p data-bbox="386 1423 1133 1451">[David, #18 of 32 unnumbered pages between pages numbered 192 and 193]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination
	 <p>The screenshot shows the Macromedia Flash MX Professional 2004 interface. The top menu bar includes File, Edit, View, Control, Debug, Window, and Help. Below the menu is a timeline with a playhead at 40 seconds. The left panel displays movie properties: Dimensions: 550 X 400 pixels, Frame Rate: 12.0 fps, Size: 91 KB (94100 B), Duration: 49 fr (4.1 s), Preload: 794 fr (66.2 s), Settings: Bandwidth: 4800 B/s (400 B/fr), State: Frame: 37, 0 KB (0664 B), Loaded: 100.0 % (49 frames), 329 KB (337107 B). The main canvas shows a video player with a textured, grainy video frame and a mouse cursor pointing at it.</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>

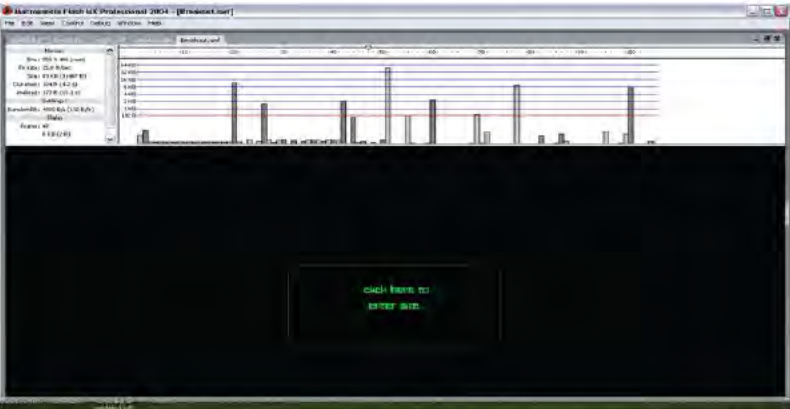
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 9	Reference/Combination


Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 22	Reference/Combination
<p>22[a] A non-transitory, computer-readable medium comprising software instructions for developing an application to be run on a mobile device, wherein the software instructions, when executed, cause a computer to:</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p> <p>See disclosures for identical claim limitation 1[a] (hereby incorporated by reference).</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>
<p>22[b] simulate one or more characteristics indicative of the mobile device; wherein the one or more characteristics indicative of the mobile device include at least one of processor type, processor speed, storage access speed, RAM size, storage size, display width, display height, pixel depth, processor</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p> <p>See disclosures for substantively identical claim limitation 4[a] (hereby incorporated by reference).</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

811 Claim 22	Reference/Combination
availability, RAM availability or storage availability	
22[c] monitor utilization of a plurality of resources over time as the application is running, wherein the monitored resources include at least one of processor usage and RAM usage;	<p>The Flash MX Professional 2004 system discloses this limitation.</p> <p>See disclosures for claim limitation 1[f] (hereby incorporated by reference).</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>
22[d] display one or more graphical images of the application's resource utilization;	<p>The Flash MX Professional 2004 system discloses this limitation.</p>
	 <p>The screenshot displays the Flash MX Professional 2004 software interface. The top portion features a timeline with a red playhead and a graph showing resource utilization over time. The graph has multiple colored bars representing different resources. Below the graph, there is a black area with green text that reads 'click frame to enter state'. The interface includes standard menu bars (File, Edit, View, Control, Window, Application, Help) and a status bar at the bottom.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 22	Reference/Combination
	<p data-bbox="378 604 1349 632">Screenshot of Bandwidth Profiler displaying graphical images of screen usage and network usage.</p>  <p data-bbox="378 1260 1382 1314">Screenshot of NTT DoCoMo, Inc. i-mode HTML Simulator in a separate display showing screen and network usage. It can display simultaneously with the Bandwidth Profiler.</p> <p data-bbox="378 1400 1382 1455">For example, the Bandwidth Profiler in Flash MX Professional 2004 displays a bar chart of the Flash application's bandwidth utilization.</p> <p data-bbox="378 1484 786 1507">[Flash MX 2004 Using Flash, pp. 38–39]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 22	Reference/Combination
	<p>The Flash Player attempts to meet the frame rate you set; the actual frame rate during playback can vary on different computers. If a document that is downloading reaches a particular frame before the frame's required data has downloaded, the document pauses until the data arrives. [¶]</p> <p>To view downloading performance graphically, you can use the Bandwidth Profiler, which shows how much data is sent for each frame according to the modem speed you specify. The Bandwidth Profiler is divided into two panes. The left pane shows information about the document, the download settings, the state, and streams, if any are included. The right pane shows information about individual frames in the document. [¶]</p> <p>In simulating the downloading speed, Flash uses estimates of typical Internet performance, not the exact modem speed. For example, if you choose to simulate a modem speed of 28.8 Kbps, Flash sets the actual rate to 2.3 Kbps to reflect typical Internet performance. The profiler also compensates for the added compression support for SWF files, which reduces the file size and improves streaming performance. [¶]</p> <p>When external SWF files, GIF and XML files, and variables are streamed into a player by using ActionScript calls such as loadMovie and getUrl, the data flows at the rate set for streaming. The stream rate for the main SWF file is reduced based on the reduction of bandwidth caused by the additional data requests. It's helpful to test your document at each speed you intend to support, and on each computer you intend to support. This helps you ensure that the document doesn't overburden the slowest connection and computer it is designed for. [¶]</p> <p>You can also generate a report of frames that are slowing playback, and then optimize or eliminate some of the content in those frames. See "Optimizing Flash documents" on page 36. [¶]</p> <p>To change the settings for the SWF file created using the Test Movie and Test Scene commands, use File > Publish Settings. See "Publishing Flash documents" on page 281. [¶]</p> <p>To test download performance: [¶] Do one of the following: [¶] Select Control > Test Scene or Control > Test Movie. [¶] If you test a scene or document, Flash publishes the current selection as a SWF file using the settings in the Publish Settings dialog box. (See "Publishing Flash documents" on page 281.) The SWF file opens in a new window and begins playing immediately. [¶] Select File > Open, and select a SWF file. [¶]</p>

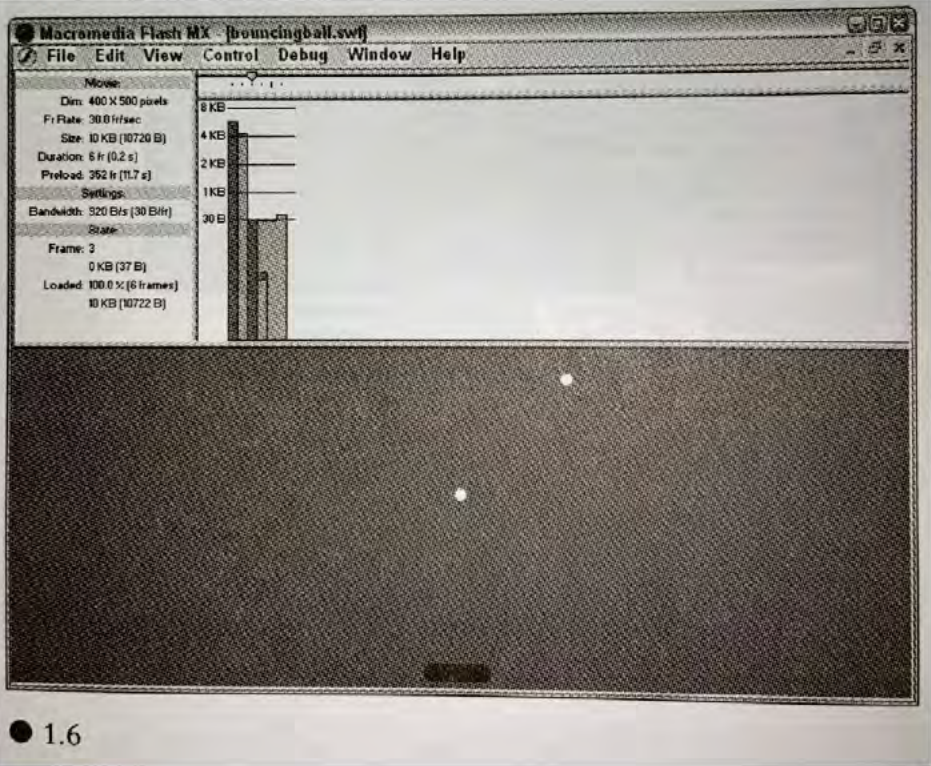
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 22	Reference/Combination
	<p>Select View > Download Settings, and select a download speed to determine the streaming rate that Flash simulates: 14.4 Kbps, 28.8 Kbps, 56 Kbps, DSL, T1 or a User Setting. To enter your own User Setting, select Customize. [¶]</p> <p>When viewing the SWF file, select View > Bandwidth Profiler to display a graph of the downloading performance. [¶] The left side of the profiler displays information about the document, its settings, its state, and streams, if any are included in the document. [¶] The right section of the profiler shows the Timeline header and graph. In the graph, each bar represents an individual frame of the document. The size of the bar corresponds to that frame's size in bytes. The red line beneath the Timeline header indicates whether a given frame streams in real time with the current modem speed set in the Control menu. If a bar extends above the red line, the document must wait for that frame to load. [¶]</p> <p>Select View > Simulate Download to turn streaming off or on. [¶] If you turn streaming off, the document starts over without simulating a web connection. [¶]</p> <p>Click a bar on the graph to display settings for the corresponding frame in the left window and stop the document. [¶]</p> <p>If necessary, adjust the view of the graph: [¶] Select View > Streaming Graph to show which frames cause pauses. This default view displays alternating light and dark gray blocks representing each frame. The side of each block indicates its relative byte size. The first frame stores a symbol's contents, so it is often larger than other frames. [¶] Select View > Frame by Frame Graph to display the size of each frame. This view helps you see which frames contribute to streaming delays. If any frame block extends above the red line in the graph, the Flash Player halts playback until the entire frame downloads. [¶]</p> <p>Close the test window to return to the normal authoring environment. [¶] Once you've set up a test environment incorporating the Bandwidth Profiler, you can open any SWF file directly in test mode. The file opens in a Flash Player window, using the Bandwidth Profiler and other selected viewing options. [¶] For more information on debugging your documents, see "Writing and Debugging Scripts" in ActionScript Reference Guide Help. [¶]</p>

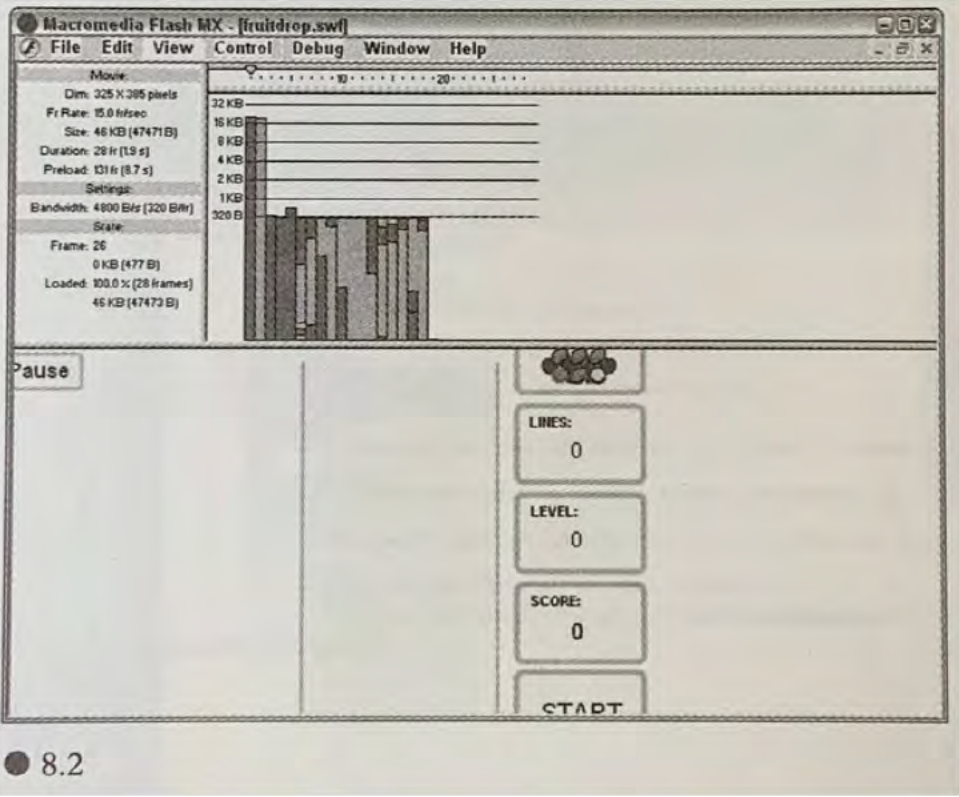
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 22	Reference/Combination
	<p>To generate a report listing the amount of data in the final Flash Player file: [¶] Select File > Publish Settings and click the Flash tab. [¶] Select Generate Size Report. [¶] Click Publish. [¶]</p> <p>Flash generates a text file with the extension .txt. (If the document file is myMovie.fla, the text file is myMovie Report.txt.) The report lists the size of each frame, shape, text, sound, video and ActionScript script by frame.</p> <p>[Flash MX 2004 Using Flash, p. 390]</p> <p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal.</p> <p>David discloses, via screenshots, the appearance of the Bandwidth Profiler.</p> <p>[David, p. 7]</p>

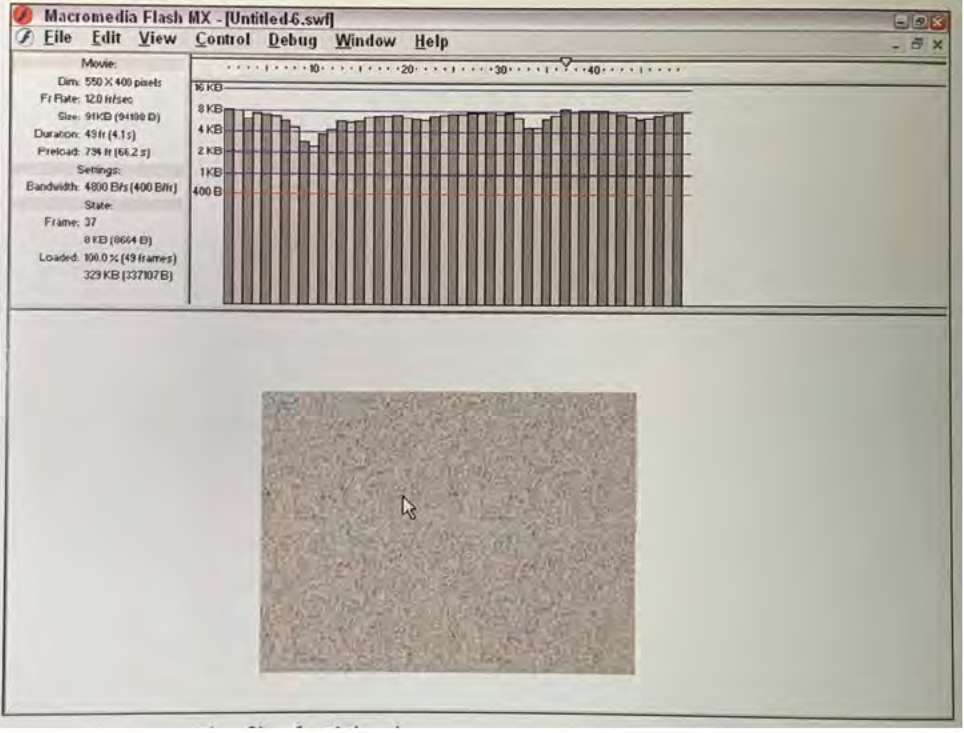
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 22	Reference/Combination
	<div><p>● 1.6</p><p>[David, p. 98]</p></div>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 22	Reference/Combination
	 <p>● 8.2</p> <p>[David, #18 of 32 unnumbered pages between pages numbered 192 and 193]</p>

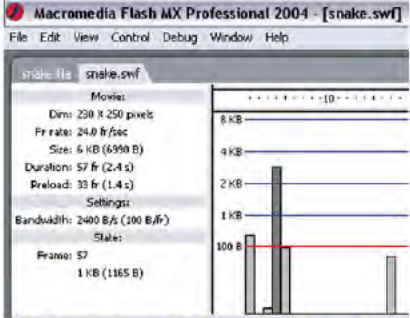
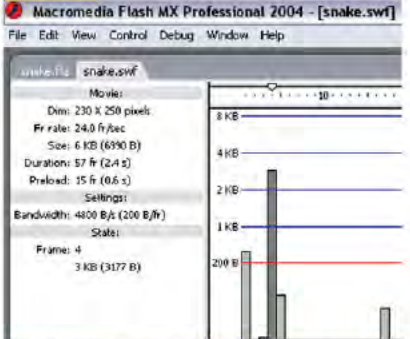
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 22	Reference/Combination
	 <p>The screenshot shows the Macromedia Flash MX Professional 2004 interface. The title bar reads 'Macromedia Flash MX - [Untitled6.swf]'. The menu bar includes 'File', 'Edit', 'View', 'Control', 'Debug', 'Window', and 'Help'. On the left, a 'Movie' panel displays properties: Dimensions: 550 X 400 pixels, Frame Rate: 12.0 fps, Size: 911KB (94100 B), Duration: 4.1s, Preload: 73% (68.2 s), Settings: Bandwidth: 4800 B/s (400 B/it), State: Frame: 37, 0 KB (0664 B), Loaded: 100.0% (49 frames), 329 KB (337107 B). The main workspace features a timeline at the top with a playhead at 4.0 seconds and a video player below it showing a grainy, textured image.</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 22	Reference/Combination
<p>22[e] correspond the utilization of a specific displayed resource at a given time with one or more functions of the application responsible for that utilization;</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p> <p>See disclosures for claim limitation 1[h] (hereby incorporated by reference).</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>
<p>22[f] initiate transmission of the application that is being developed to one or more physical versions of the mobile device.</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p> <p>See disclosures for claim 2 (hereby incorporated by reference).</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

*811 Claim 24	Reference/Combination
<p>24[a] The medium of claim 22, wherein the instructions simulate one or more characteristics, including bandwidth, indicative of a network on which the mobile device can operate.</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p>  <p>Profile display window of snake.swf using download simulator at 28.8 kbps, which simulates Bandwidth at 2400 B/s.</p>  <p>Profile display window of snake.swf using download simulator at 56 kbps, which simulates Bandwidth at 4800 B/s.</p> <p>Screenshots above from the Flash MX Professional 2004 emulator show two different configurations to simulate characteristics including bandwidth.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 24	Reference/Combination
	<p>For example, the Bandwidth Profiler in Flash MX Professional 2004 simulates bandwidth indicative of a network on which the mobile device can operate.</p> <p>[Flash MX 2004 Using Flash, pp. 38–39]</p> <p>The Flash Player attempts to meet the frame rate you set; the actual frame rate during playback can vary on different computers. If a document that is downloading reaches a particular frame before the frame's required data has downloaded, the document pauses until the data arrives. [¶]</p> <p>To view downloading performance graphically, you can use the Bandwidth Profiler, which shows how much data is sent for each frame according to the modem speed you specify. The Bandwidth Profiler is divided into two panes. The left pane shows information about the document, the download settings, the state, and streams, if any are included. The right pane shows information about individual frames in the document. [¶]</p> <p>In simulating the downloading speed, Flash uses estimates of typical Internet performance, not the exact modem speed. For example, if you choose to simulate a modem speed of 28.8 Kbps, Flash sets the actual rate to 2.3 Kbps to reflect typical Internet performance. The profiler also compensates for the added compression support for SWF files, which reduces the file size and improves streaming performance. [¶]</p> <p>When external SWF files, GIF and XML files, and variables are streamed into a player by using ActionScript calls such as loadMovie and getUrl, the data flows at the rate set for streaming. The stream rate for the main SWF file is reduced based on the reduction of bandwidth caused by the additional data requests. It's helpful to test your document at each speed you intend to support, and on each computer you intend to support. This helps you ensure that the document doesn't overburden the slowest connection and computer it is designed for. [¶]</p> <p>You can also generate a report of frames that are slowing playback, and then optimize or eliminate some of the content in those frames. See "Optimizing Flash documents" on page 36. [¶]</p> <p>To change the settings for the SWF file created using the Test Movie and Test Scene commands, use File > Publish Settings. See "Publishing Flash documents" on page 281. [¶]</p>

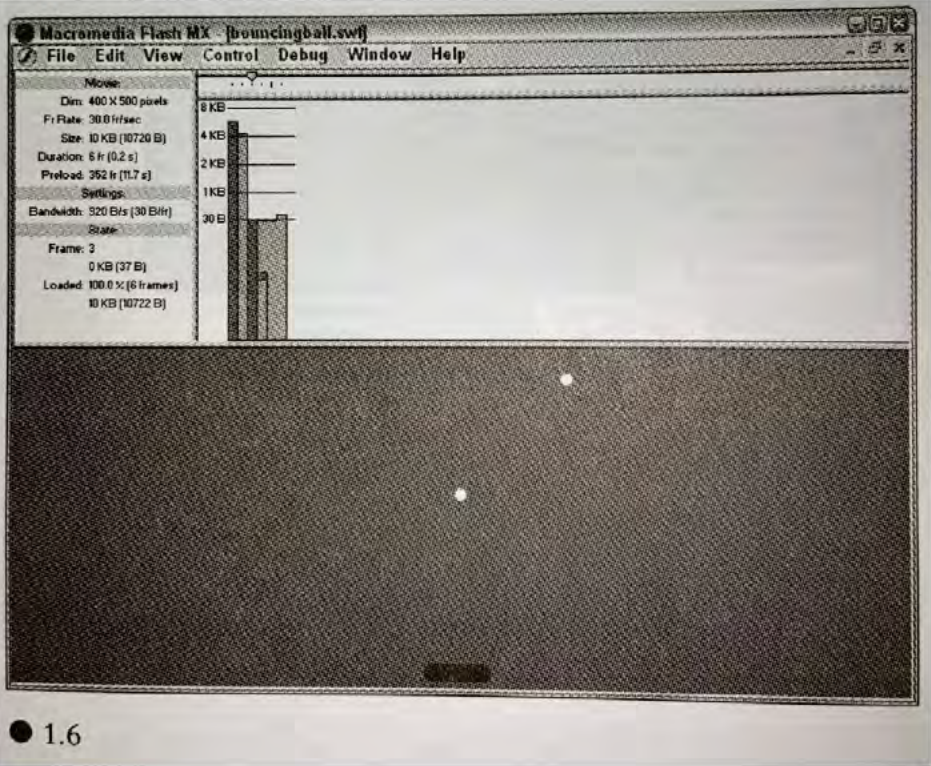
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 24	Reference/Combination
	<p>To test download performance: [¶] Do one of the following: [¶] Select Control > Test Scene or Control > Test Movie. [¶] If you test a scene or document, Flash publishes the current selection as a SWF file using the settings in the Publish Settings dialog box. (See “Publishing Flash documents” on page 281.) The SWF file opens in a new window and begins playing immediately. [¶] Select File > Open, and select a SWF file. [¶]</p> <p>Select View > Download Settings, and select a download speed to determine the streaming rate that Flash simulates: 14.4 Kbps, 28.8 Kbps, 56 Kbps, DSL, T1 or a User Setting. To enter your own User Setting, select Customize. [¶]</p> <p>When viewing the SWF file, select View > Bandwidth Profiler to display a graph of the downloading performance. [¶] The left side of the profiler displays information about the document, its settings, its state, and streams, if any are included in the document. [¶] The right section of the profiler shows the Timeline header and graph. In the graph, each bar represents an individual frame of the document. The size of the bar corresponds to that frame’s size in bytes. The red line beneath the Timeline header indicates whether a given frame streams in real time with the current modem speed set in the Control menu. If a bar extends above the red line, the document must wait for that frame to load. [¶]</p> <p>Select View > Simulate Download to turn streaming off or on. [¶] If you turn streaming off, the document starts over without simulating a web connection. [¶]</p> <p>Click a bar on the graph to display settings for the corresponding frame in the left window and stop the document. [¶]</p> <p>If necessary, adjust the view of the graph: [¶] Select View > Streaming Graph to show which frames cause pauses. This default view displays alternating light and dark gray blocks representing each frame. The side of each block indicates its relative byte size. The first frame stores a symbol’s contents, so it is often larger than other frames. [¶] Select View > Frame by Frame Graph to display the size of each frame. This view helps you see which frames contribute to streaming delays. If any frame block extends above the red line in the graph, the Flash Player halts playback until the entire frame downloads. [¶]</p>

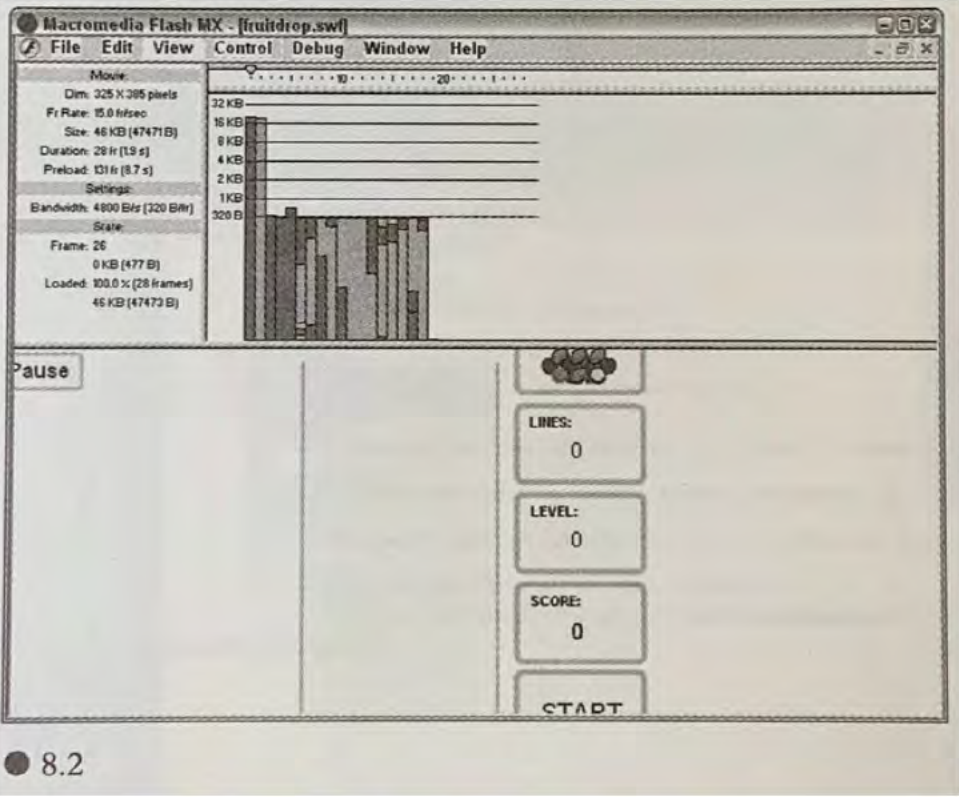
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 24	Reference/Combination
	<p>Close the test window to return to the normal authoring environment. [¶] Once you've set up a test environment incorporating the Bandwidth Profiler, you can open any SWF file directly in test mode. The file opens in a Flash Player window, using the Bandwidth Profiler and other selected viewing options. [¶] For more information on debugging your documents, see "Writing and Debugging Scripts" in ActionScript Reference Guide Help. [¶]</p> <p>To generate a report listing the amount of data in the final Flash Player file: [¶] Select File > Publish Settings and click the Flash tab. [¶] Select Generate Size Report. [¶] Click Publish. [¶]</p> <p>Flash generates a text file with the extension .txt. (If the document file is myMovie.fla, the text file is myMovie Report.txt.) The report lists the size of each frame, shape, text, sound, video and ActionScript script by frame.</p> <p>[Flash MX 2004 Using Flash, p. 390]</p> <p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal.</p> <p>David discloses, via screenshots, the appearance of the Bandwidth Profiler.</p> <p>[David, p. 7]</p>

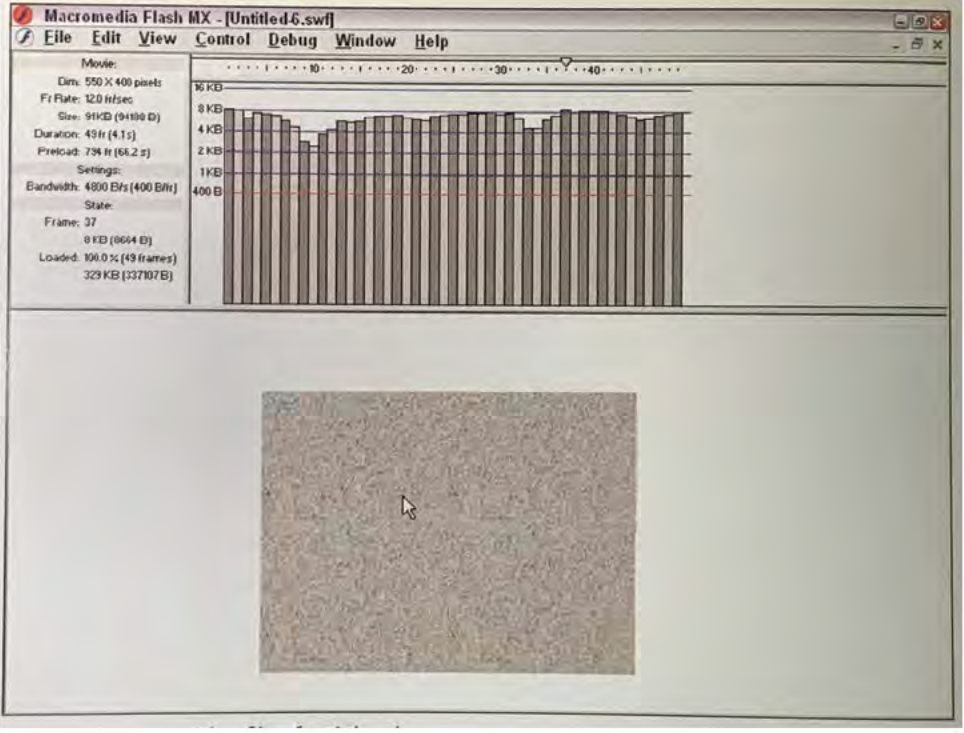
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 24	Reference/Combination
	<div><p>● 1.6</p><p>[David, p. 98]</p></div>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 24	Reference/Combination
	<div><p>● 8.2</p><p>[David, #18 of 32 unnumbered pages between pages numbered 192 and 193]</p></div>

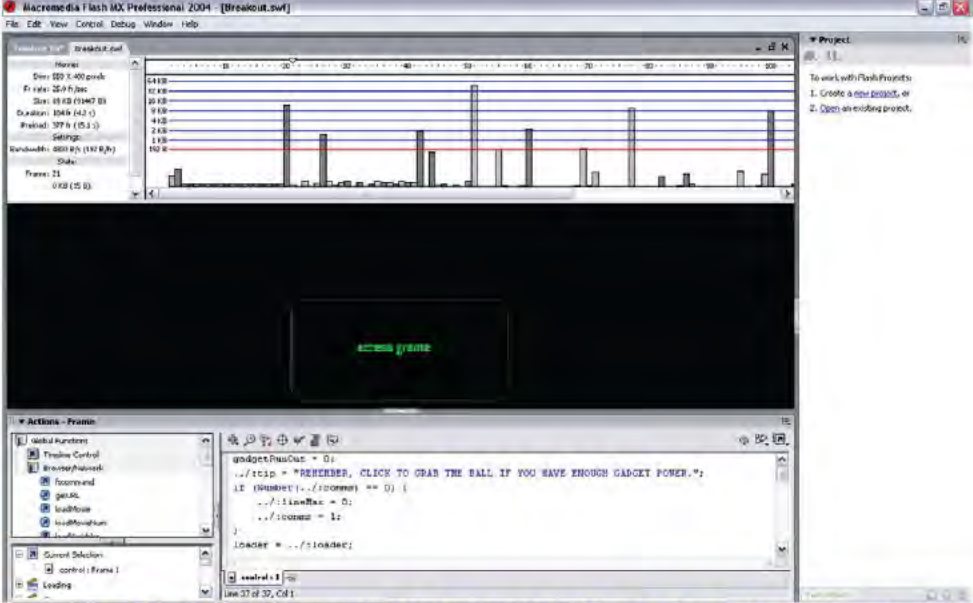
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 24	Reference/Combination
	 <p>The screenshot shows the Macromedia Flash MX Professional 2004 interface. The top menu bar includes File, Edit, View, Control, Debug, Window, and Help. Below the menu is a timeline with a playhead at 40 seconds. The left panel displays movie properties: Dimensions: 550 X 400 pixels, Frame Rate: 12.0 fps, Size: 91 KB (94100 B), Duration: 49 fr (4.1 s), Preload: 794 fr (66.2 s), Settings: Bandwidth: 4800 B/s (400 B/fr), State: Frame: 37, 0 KB (0664 B), Loaded: 100.0 % (49 frames), 329 KB (337107 B). The main canvas shows a video player with a textured, grainy video frame and a mouse cursor pointing at it.</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 24	Reference/Combination

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

’811 Claim 26	Reference/Combination
<p>26[a] The medium of claim 24, wherein the instructions simulate one or more network events that occur when interacting with a wireless network, wherein a user can create scripts to emulate actions of real user behavior to determine the performance of the application, or the network, or both.</p>	<p>The Flash MX Professional 2004 system discloses this limitation.</p> <p>For example, Flash MX Professional 2004 simulates one or more network events that occur when interacting with a wireless network. See disclosures for claim limitation 8[a] (hereby incorporated by reference).</p> <p>In addition, for example, Flash MX Professional 2004 allows a user to create scripts to emulate actions of real user behavior to determine the performance of the application, or the network, or both.</p>  <p>Screenshot of Flash MX Professional 2004 Bandwidth Profiler interface with “Actions – Frame” window enabling creating ActionScript scripts within the Flash application.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 26	Reference/Combination
	<p>For example, the manual discloses that Flash MX Professional 2004 supports creating ActionScript (scripts).</p> <p>[<i>Flash MX 2004 Using Flash</i>, p. 23]</p> <p>Working with scenes ¶ To organize a document thematically, you can use scenes. For example, you might use separate scenes for an introduction, a loading message, and credits. ¶ Note: You cannot use scenes in a screen-based document. For information on screens, see Chapter 12, “Working with Screens (Flash Professional Only),” on page 197. ¶</p> <p>When you publish a Flash document that contains more than one scene, the scenes in the document play back in the order they are listed in the Scene panel in the Flash document. Frames in the document are numbered consecutively through scenes. For example, if a document contains two scenes with ten frames each, the frames in Scene 2 are numbered 11–20. ¶</p> <p>You can add, delete, duplicate, rename, and change the order of scenes. ¶</p> <p>To stop or pause a document after each scene, or to let users navigate the document in a nonlinear fashion, you use actions. See “ActionScript Basics” in ActionScript Reference Guide Help. ¶</p> <p>To display the Scene panel:</p> <ul style="list-style-type: none"> • Select Window > Design Panels > Scene. ¶ <p>To view a particular scene:</p> <ul style="list-style-type: none"> • Select View > Go To and then select the name of the scene from the submenu. ¶ <p>To add a scene, do one of the following:</p> <ul style="list-style-type: none"> • Click the Add Scene button in the Scene panel. • Select Insert > Scene.

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 26	Reference/Combination
	<p>ActionScript adds complex interactivity, playback control, and data display, and can store and retrieve information, and thereby can emulate actions of real user behavior to determine the performance of the application. ActionScript also has networking capabilities, such as by calling loadMovie and getUrl, so it can also determine the performance of the network.</p> <p>[Flash MX 2004 Using Flash, p. 18]</p> <p>ActionScript is the Flash scripting language that enables you to add complex interactivity, playback control, and data display to a Flash document. You can add ActionScript within the Flash authoring environment using the Actions panel, or create external ActionScript files using an external editor. [¶]</p> <p>You don't need to understand every ActionScript element to begin scripting; if you have a clear goal, you can start building scripts with simple actions. You can incorporate new elements of the language as you learn them to accomplish more complicated tasks. [¶]</p> <p>Like other scripting languages, ActionScript follows its own rules of syntax, reserves keywords, provides operators, and allows you to use variables to store and retrieve information. ActionScript includes built-in objects and functions and allows you to create your own objects and functions. For more information on ActionScript, see "ActionScript Basics" in ActionScript Reference Guide Help.</p> <p>[Flash MX 2004 Using Flash, p. 38]</p> <p>When external SWF files, GIF and XML files, and variables are streamed into a player by using ActionScript calls such as loadMovie and getUrl, the data flows at the rate set for streaming. The stream rate for the main SWF file is reduced based on the reduction of bandwidth caused by the additional data requests.</p> <p>As another example, the Bandwidth Profiler can run a scripted simulation of a download, thereby creating a script to emulate a download action (emulate actions of real user behavior) to determine the performance of the application and the network.</p> <p>[Flash MX 2004 Using Flash, pp. 38–39]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 26	Reference/Combination
	<p>The Flash Player attempts to meet the frame rate you set; the actual frame rate during playback can vary on different computers. If a document that is downloading reaches a particular frame before the frame's required data has downloaded, the document pauses until the data arrives. [¶]</p> <p>To view downloading performance graphically, you can use the Bandwidth Profiler, which shows how much data is sent for each frame according to the modem speed you specify. The Bandwidth Profiler is divided into two panes. The left pane shows information about the document, the download settings, the state, and streams, if any are included. The right pane shows information about individual frames in the document. [¶]</p> <p>In simulating the downloading speed, Flash uses estimates of typical Internet performance, not the exact modem speed. For example, if you choose to simulate a modem speed of 28.8 Kbps, Flash sets the actual rate to 2.3 Kbps to reflect typical Internet performance. The profiler also compensates for the added compression support for SWF files, which reduces the file size and improves streaming performance. [¶]</p> <p>When external SWF files, GIF and XML files, and variables are streamed into a player by using ActionScript calls such as loadMovie and getUrl, the data flows at the rate set for streaming. The stream rate for the main SWF file is reduced based on the reduction of bandwidth caused by the additional data requests. It's helpful to test your document at each speed you intend to support, and on each computer you intend to support. This helps you ensure that the document doesn't overburden the slowest connection and computer it is designed for. [¶]</p> <p>You can also generate a report of frames that are slowing playback, and then optimize or eliminate some of the content in those frames. See "Optimizing Flash documents" on page 36. [¶]</p> <p>To change the settings for the SWF file created using the Test Movie and Test Scene commands, use File > Publish Settings. See "Publishing Flash documents" on page 281. [¶]</p> <p>To test download performance: [¶] Do one of the following: [¶] Select Control > Test Scene or Control > Test Movie. [¶] If you test a scene or document, Flash publishes the current selection as a SWF file using the settings in the Publish Settings dialog box. (See "Publishing Flash documents" on page 281.) The SWF file opens in a new window and begins playing immediately. [¶] Select File > Open, and select a SWF file. [¶]</p>

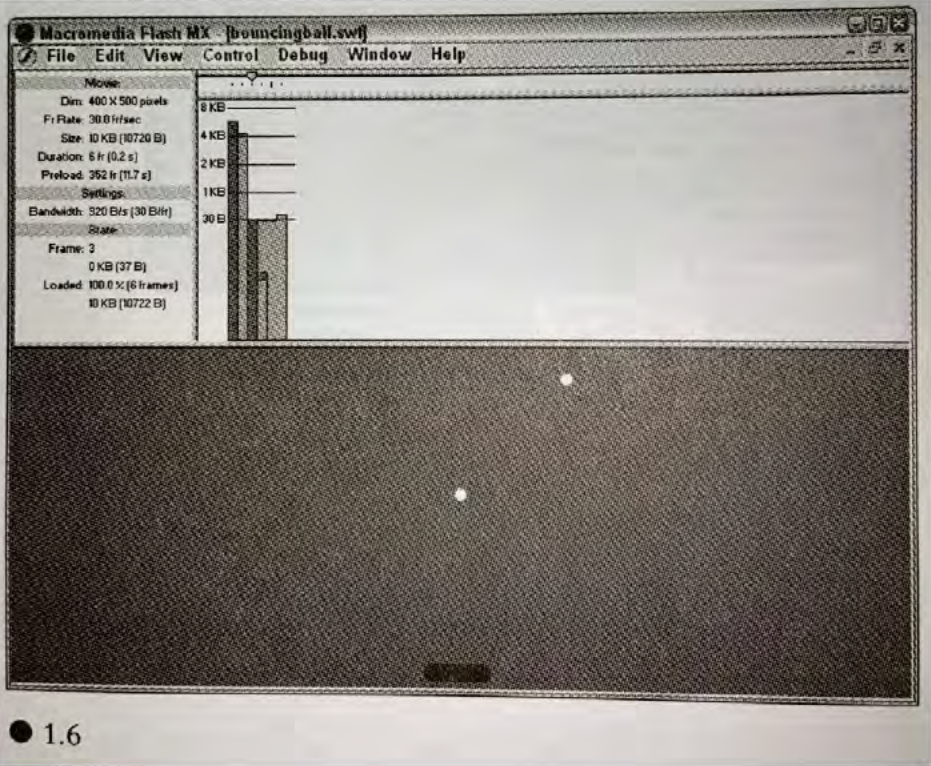
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 26	Reference/Combination
	<p>Select View > Download Settings, and select a download speed to determine the streaming rate that Flash simulates: 14.4 Kbps, 28.8 Kbps, 56 Kbps, DSL, T1 or a User Setting. To enter your own User Setting, select Customize. [¶]</p> <p>When viewing the SWF file, select View > Bandwidth Profiler to display a graph of the downloading performance. [¶] The left side of the profiler displays information about the document, its settings, its state, and streams, if any are included in the document. [¶] The right section of the profiler shows the Timeline header and graph. In the graph, each bar represents an individual frame of the document. The size of the bar corresponds to that frame's size in bytes. The red line beneath the Timeline header indicates whether a given frame streams in real time with the current modem speed set in the Control menu. If a bar extends above the red line, the document must wait for that frame to load. [¶]</p> <p>Select View > Simulate Download to turn streaming off or on. [¶] If you turn streaming off, the document starts over without simulating a web connection. [¶]</p> <p>Click a bar on the graph to display settings for the corresponding frame in the left window and stop the document. [¶]</p> <p>If necessary, adjust the view of the graph: [¶] Select View > Streaming Graph to show which frames cause pauses. This default view displays alternating light and dark gray blocks representing each frame. The side of each block indicates its relative byte size. The first frame stores a symbol's contents, so it is often larger than other frames. [¶] Select View > Frame by Frame Graph to display the size of each frame. This view helps you see which frames contribute to streaming delays. If any frame block extends above the red line in the graph, the Flash Player halts playback until the entire frame downloads. [¶]</p> <p>Close the test window to return to the normal authoring environment. [¶] Once you've set up a test environment incorporating the Bandwidth Profiler, you can open any SWF file directly in test mode. The file opens in a Flash Player window, using the Bandwidth Profiler and other selected viewing options. [¶] For more information on debugging your documents, see "Writing and Debugging Scripts" in ActionScript Reference Guide Help. [¶]</p>

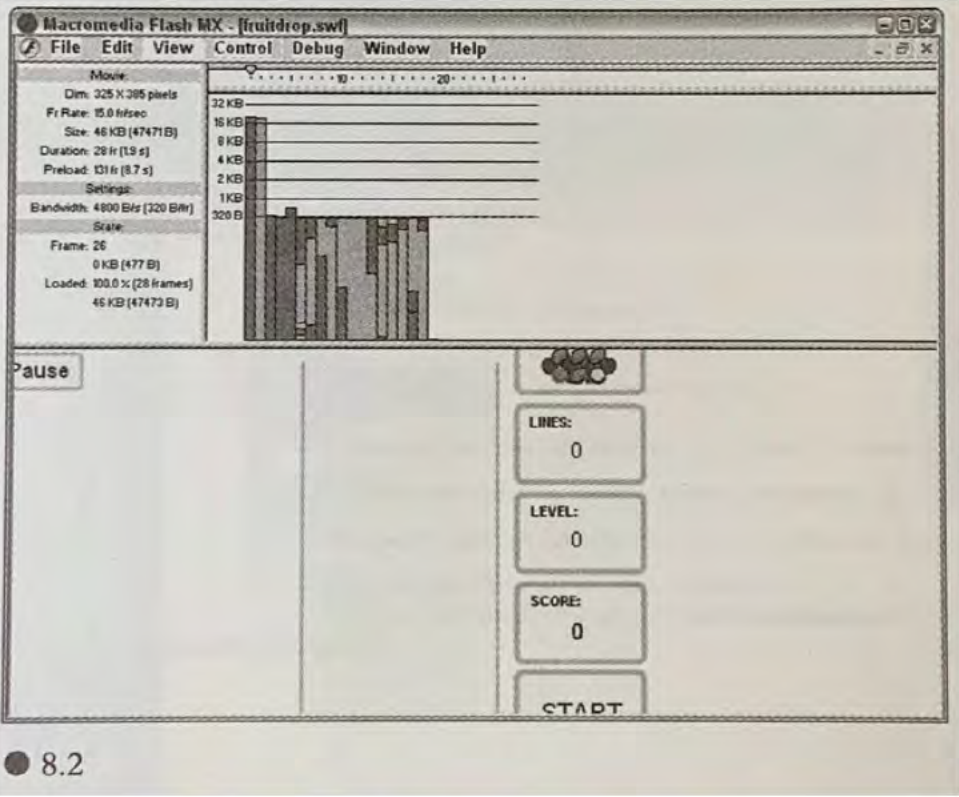
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 26	Reference/Combination
	<p>To generate a report listing the amount of data in the final Flash Player file: [¶] Select File > Publish Settings and click the Flash tab. [¶] Select Generate Size Report. [¶] Click Publish. [¶]</p> <p>Flash generates a text file with the extension .txt. (If the document file is myMovie.fla, the text file is myMovie Report.txt.) The report lists the size of each frame, shape, text, sound, video and ActionScript script by frame.</p> <p>[Flash MX 2004 Using Flash, p. 390]</p> <p>In addition, Flash files are compact, making them perfect for wireless carrier networks, where transfer rates range between 9.6 and 60 kilobytes per second (Kbps). Mobile devices, unlike desktop computers, have limited storage capability, so the small footprint of Flash is ideal.</p> <p>David discloses, via screenshots, the appearance of the Bandwidth Profiler.</p> <p>[David, p. 7]</p>

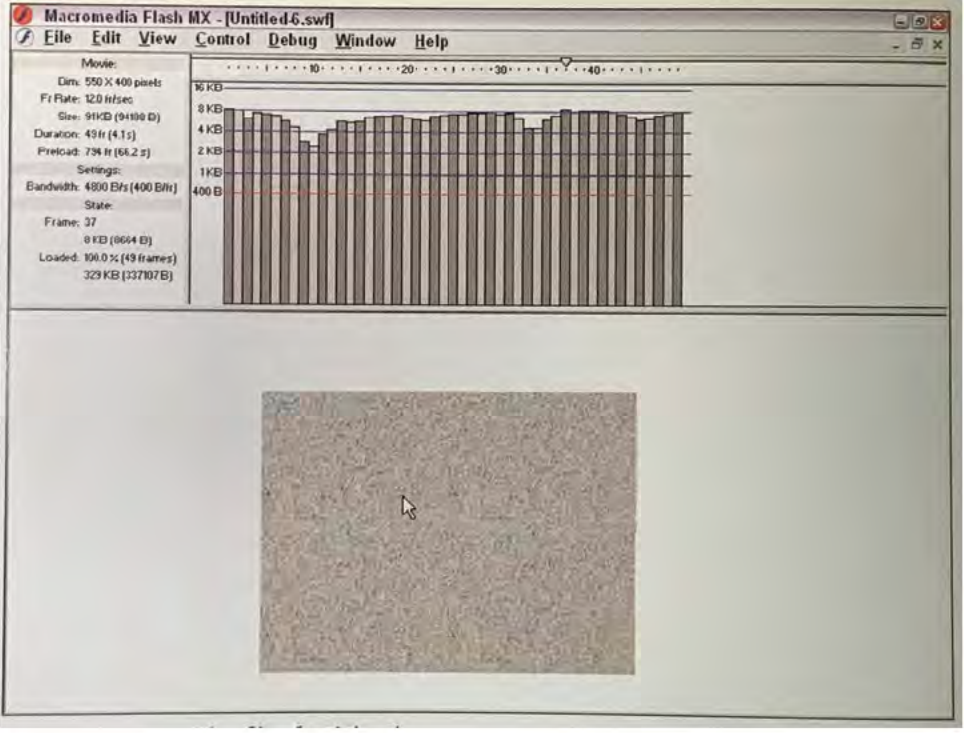
Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 26	Reference/Combination
	<div><p>● 1.6</p><p>[David, p. 98]</p></div>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 26	Reference/Combination
	 <p>● 8.2</p> <p>[David, #18 of 32 unnumbered pages between pages numbered 192 and 193]</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 26	Reference/Combination
	 <p>The screenshot shows the Macromedia Flash MX Professional 2004 interface. The top menu bar includes File, Edit, View, Control, Debug, Window, and Help. Below the menu is a timeline with a playhead at 40 seconds. The left panel displays movie properties: Dimensions: 550 X 400 pixels, Frame Rate: 12.0 fps, Size: 911KB (94100 B), Duration: 49 fr (4.1 s), Preload: 734 fr (68.2 s), Settings: Bandwidth: 4800 B/s (400 B/fr), State: Frame: 37, 0 KB (0654 B), Loaded: 100.0 % (49 frames), 329 KB (327107 B). The main canvas shows a video player with a textured, grainy video frame and a mouse cursor pointing at it.</p> <p>To the extent this limitation is not explicitly disclosed by the Flash MX Professional 2004 system, it is inherent or would have been obvious to a POSA from the teachings of the Flash MX Professional 2004 system, the knowledge of a POSA, and/or one or more of the references identified in JPMC's Invalidity Contentions.</p>

Wapp Tech Limited Partnership et al. v. JPMorgan Chase Bank, N.A., No. 4:23-cv-1137 (E.D. Tex.)

'811 Claim 26	Reference/Combination